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**FACTORS DETERMINING TAX ADMINISTRATION EFFICIENCY IN
HADHRAMOUT, YEMEN: PERSPECTIVE OF INDIVIDUAL TAXPAYERS**

By



ABOBAKR RAMADHAN SALEM AL_HARETHI

UUM
Universiti Utara Malaysia

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By



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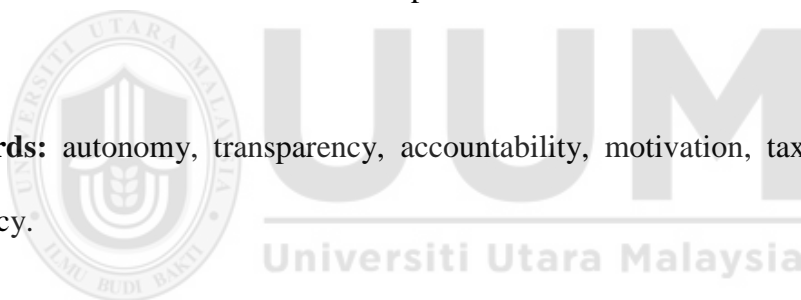
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ABSTRACT

Tax is one of the main sources of government revenue. However, not every national government has been able to effectively exploit this great opportunity to generate revenue. The tax is collected at a lower level because of the inefficient of tax administration in Yemen. The purpose of this study is to investigate the determinants of tax administration efficiency from the Yemeni perspective. This study is based on four variables used to determine factors that affect tax administration efficiency in Yemen. The four variables that are measured in this current study are autonomy, accountability, transparency and motivation. This study is underpinned by the goal-setting theory and further supported by the governance theory. The data were collected through the distribution of questionnaires to 379 participants in Yemen. A total of 223 questionnaires were analyse using the Statistical Package for Social Sciences (SPSS) version 24. Based on multiple regression analysis and other statistical techniques, the results of the study showed significant relationship between autonomy, transparency, accountability and motivation with the efficiency of tax administration. Given the findings from the study, it is highlights several limitations and suggestions future studies that can be conducted in this scope.

Keywords: autonomy, transparency, accountability, motivation, tax administration efficiency.



ABSTRAK

Cukai adalah salah satu sumber utama hasil kerajaan. Walau bagaimanapun, tidak setiap kerajaan negara telah dapat memanfaatkan peluang hebat ini untuk menjana pendapatan. Cukai dikumpulkan pada tahap yang lebih rendah kerana pentadbiran cukai yang tidak cekap di Yemen. Tujuan kajian ini adalah untuk mengkaji penentu kecekapan pentadbiran cukai dari perspektif Yemen. Kajian ini berdasarkan empat pemboleh ubah yang digunakan untuk menentukan faktor-faktor yang mempengaruhi kecekapan pentadbiran cukai di Yemen. Empat pemboleh ubah tersebut yang diukur dalam kajian semasa ini adalah autonomi, akauntabiliti, ketelusan dan motivasi. Kajian ini berteraskan teori penetapan matlamat dan disokong oleh teori tadbir urus. Data dikumpul melalui pengagihan soal selidik kepada 379 peserta di Yemen. Sejumlah 223 soal selidik telah di analisis dengan menggunakan Pakej Statistik untuk Sains Sosial (SPSS) versi 24. Berdasarkan analisis regresi berganda dan teknik statistik yang lain, hasil kajian menunjukkan hubungan yang signifikan antara autonomi, ketelusan, akauntabiliti dan motivasi dengan kecekapan pentadbiran cukai. Penemuan kajian tersebut telah menonjolkan beberapa batasan dan cadangan kajian masa depan yang boleh dijalankan dalam skop ini.

Kata kunci: *autonomi, akauntabiliti, ketelusan, motivasi, kecekapan pentadbiran cukai.*



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Abobakr Ramadhan Salem Al_Harethi

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LIST OF ABBREVIATIONS

ATA	Autonomy of Tax Administration
GST	General Sales Tax
KMO	Kaiser-Meyer-Olkin
PD	Presidential Decree
SAS	Self-Assessment System
SPSS	Statistical Package for Social Sciences
TIQN	Transparency International's Quarterly Newsletter
UN	United Nation
UK	United Kingdom
YTA	Yemen Tax Authority



CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Tax revenue is one of the primary sources of income to various governments around the world. In fact, taxes are important and primary sources of income to governments and a means for financing critical programs, such as health care, provision of services and infrastructure, such as construction of roads for the general public as well as law enforcement (Mansor & Gurama, 2016). Al-Fasel (2014) argued that tax revenues are a very significant source of income to the Yemeni government after crude oil proceed, as show in Figure 1.1.

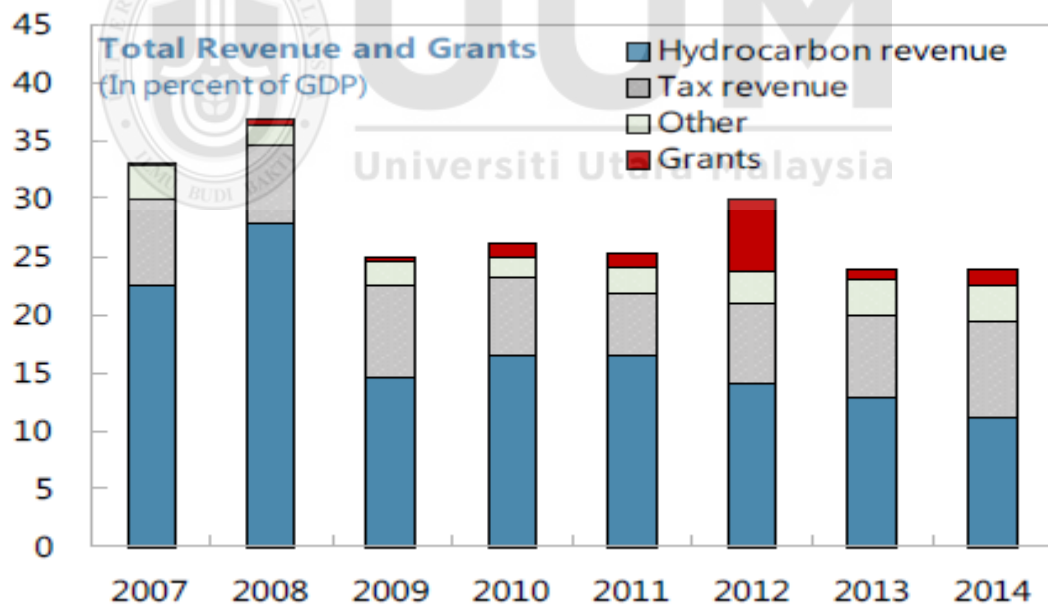


Figure 1.1

Total revenues and grants

Sources: Yemeni authorities; and IMF staff estimates and projections.

Conversely, issues of taxpayers' noncompliance and inefficient tax administration have hindered sufficient revenue generation. Yemen is categorized as one of the least developing countries suffering from lack in tax revenue (Yemen Tax Authority, 2010), as show in Figure 1.2.

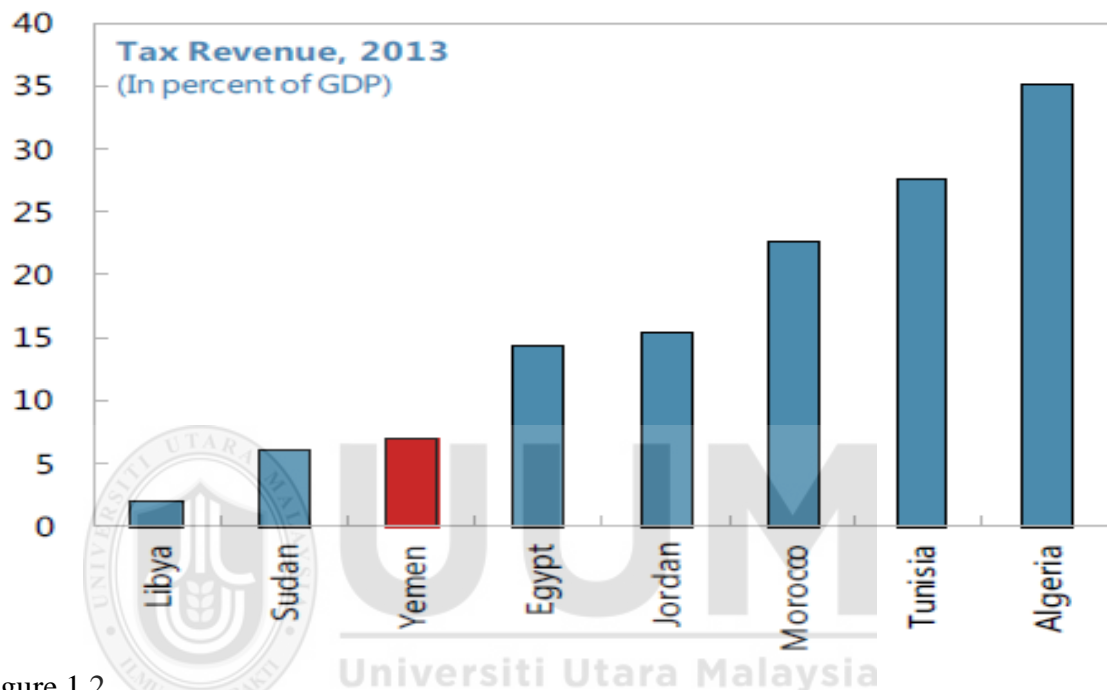


Figure 1.2
Tax revenue remains among the lowest in MENA...
Sources: Yemeni authorities; and IMF staff estimates and projections.

As a result, this situation of noncompliance and inefficient tax administration has adversely affected the government's financial capabilities and activities meant for shouldering public expenditure (Gurama, 2015; Abiola & Asiweh, 2012). Over the period from 2004 to 2013, it was proven that the amount of tax non-compliance increased from USD164 million in 2004 to USD4 billion in 2014 (Central Organisation of Audit & Control [COCA], 2012; Ministry of Planning & International Cooperation [MPIC], 2009; COCA, 2014; Al-Saadi, 2014; Al-Sharabi & Al-Slehi, 2015; Al-Taffi & Abdul-Jabbar, 2016) as shown in Figure 1.3.

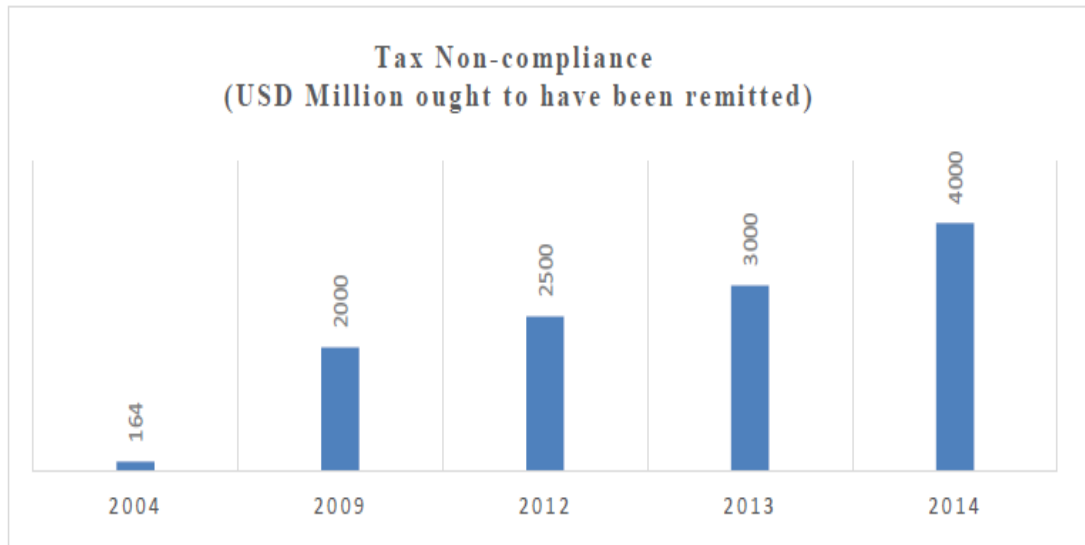


Figure 1.3

Tax Non-compliance in Yemen (USD Million)

Source: (MPIC, 2009; COCA, 2012; COCA, 2014; Al-Saadi, 2014; Al-Ttaffi & Abdul-Jabbar, 2016; Al-Sharabi & Al-Slehi, 2015)

Accordingly, efficiency is defined as the proper utilization of organizational resources by doing the right thing in the right position at the right time (Ridley, 2008). Earlier, Waldo (1984) argued that efficiency of an organization is defined by measuring the ratio of impact actually realized with the utilization of available resources to an accomplished task or objective. In addition, Manzoor (2014) postulated that efficiency simply implies taking the cheapest means or shortest path towards accomplishing desired goals or targets, i.e., by achieving maximum values by using limited resources. These postulations and arguments stress the meaning of efficiency and how efficiency is important for achieving organizational goals and objectives.

In tax administration, efficiency is identified as a primary determinant of good governance and an effective strategy for revenue generation. Rahman (2009) argued that efficient tax administration would enhance tax compliance, increase growth of revenue generation and reduce the delay in computing and remitting taxes. Indeed, to some extent, efficient tax administration would encourage investment and redistribute

wealth in a proficient and effective way. Akintye and Tashie (2013) and Mba (2012) argued that an efficient tax administration is one that is strategically planned and coordinated, and tax revenue collected from the taxpayers in a mutually pleasant process. Hence, efficient tax administration comprises all the principles of accountability, autonomy, transparency, motivation in coordinating and motivating staff that are charged with the interaction with taxpayers and other stakeholders in the tax system for generating income for the government coffers (Akintye & Tashie, 2013; Mba, 2012).

Efficient tax administration would increase revenue collection and reduce the cost of tax payment. According to the OECD (2011), the efficiency of tax administration in imposing and collecting tax revenue would reduce process cost and provide better services to the taxpayers and other stakeholders in the tax system. Other stakeholders in the tax administration include tax practitioners, policy-setters, researchers and the government, who would all benefit in general from the efficient process of tax administration. In addition, tax administration's internal structure, budget allocation, autonomy, employees' remuneration and incentives, accountability and transparency, are among the factors for ascertaining the efficiency of the tax administration the (OECD, 2011).

Indeed, it clearly shows that efficient tax administration will reduce the cost of compliance, ease the process for all tax stakeholders and increase tax revenue collection for the government. Inefficient tax administration would render the tax system ineffective and would yield lower tax revenues for the government and hence, incapacitate the government's efforts in providing social amenities to its populace (Gurama & Mansor, 2015; Mba, 2012). In addition, efficient tax administration is

dependent on effective tax laws and policies that can yield a more positive outcome in terms of government expenditure for public services (Al-Faseel, 2014).

However, whenever and wherever tax authorities impose taxes where the process of the tax system is not efficient, transparent, accountable and encouraging, many firms and individuals would try not to comply by way of avoiding or worse still, evading taxes (Rahman, 2009; Gurama & Mansor, 2015). As reported only few studies were documented on this issue especially from developing economies. In addition, Enahoro and Olabisi (2012) stated that despite the importance of efficiency of the tax system, very few studies have considered it as means for achieving effective tax compliance and revenue generation in developing countries.

In a country like Yemen, where tax revenue is the second source of government revenue, it is very significant to have an efficient tax administration that is capable of implementing tax policies and generating adequate revenue for the government. Understanding and having efficient tax administration in developing countries is of paramount significance for increasing tax compliance and enhancing tax revenue for the government (Enahoro & Olabisi, 2012). Therefore, there is no doubt that efficient tax administration is a good tool and machinery for achieving effective revenue collection and increasing compliance with the tax laws and policies. Efficient tax administration would strengthen the country's tax system, in turn, helping to accomplish the tax authority's objectives.

1.2 Problem Statement

Among Middle Eastern countries, Yemen is categorized as one of the least developing countries (Figure 1.2) suffering from a magnitude of financial and administrative problems, including tax administration (Transparency International's Quarterly Newsletter [TIQN], 2016). Tax revenue is one of the main financial sources of the Yemeni government's revenue (Figure 1.1), of which 24% of the Yemeni budget has been financed by tax revenue during the period from 2004 to 2013 (Al-Faseel, 2014).

However, the tax administration is highly plagued by the problems of inefficiency in the tax process, lack of autonomy, accountability, poor leadership style, lack of transparency and lack of motivation, as among the important factors that are adversely affecting the tax authority's performance and effectiveness (Al-Saadi, 2014; Al-Sharabi & Al-Slehi, 2015).

Indeed, from year 2000 to 2010, many new tax laws were legislated to improve and reform the Yemeni tax administration and the tax system's weaknesses and increase its efficiency and effectiveness (Presidential Decree No. 17/2010 PD17, 2010). The essence of the laws and reforms is to facilitate the way the tax administration is being governed and to increase its commitment, efficiency and effectiveness toward generating sufficient tax revenues for financing the budget and at the same time, increasing service quality provided for taxpayers.

Although in 2004, the Self-Assessment System (SAS) was introduced in Yemen to facilitate the process of computing and collecting tax revenue and also to reduce the delays in disbursing the income to the government, the problems of inefficiency and

ineffectiveness of the tax administration still prevail (Al-Batly, 2014; Al-Saadi, 2014; Al-Sharabi & Al-Slehi, 2015).

Thus, this problem needs to be addressed to ensure the Yemeni government can have an effective tax system that is capable of generating income for financing public expenditure and ensuring tax compliance of taxpayers. Taxpayers always maintain an attitude of weighing what can be received in return for the tax paid and the benefits they can yield as a result of noncompliance (Al-Ttaffi & Abdul-Jabbar, 2016).

As mentioned above, Yemen is a country with a high level of tax evasion and tax avoidance due to the inefficiency of the tax administration and the ineffectiveness of the tax system (Figure 1.3). Taxpayers have been unable to trace the impact of previous tax collected that can encourage them to continue complying (Al-Saadi, 2014).

The issue of tax administration efficiency has been examined by several previous studies around the world, such as in Malaysia, China, Nigeria, Albania and Libya. Mostly, these past researches have focused on autonomy, accountability, transparency and motivation as the main predictors of tax administration efficiency (Muaen, 2016; Kiri, 2016; Shagari & Saad, 2015; Shagari, 2014; Mba, 2012; Mansor & Tayib, 2010; Shah, 2006; Kiser & Baker, 1994). Moreover, these variables have been examined with efficiency in other areas i.e., (organizational performance efficiency; efficiency of teaching staff performance) such as by Afful-Broni (2012); Crandall (2010); Demazure, Verhoest and Bouckaert (2008); and Goerdel and Pitts (2006). However, the literature review shows a lack of studies conducted in the Middle Eastern countries, and Yemen is one of them.

According to the annual report by the OECD (2011), the internal structure, autonomy, accountability and transparency, are among the factors which have a role in determining the efficiency of the tax administration. Therefore, the current study attempts to address determinants of autonomy, accountability, transparency and motivation and their influence on tax administration efficiency in Yemen. In addition, this research is likely to be the first study in an environment, like Yemen.

1.3 Research Questions

This study is intending to identify factors determining tax administration efficiency in Yemen. To achieve this, the study seeks to answer the following research question:

- 1- What is the relationship between autonomy, accountability, transparency and motivation with tax administration efficiency?
- 2- What is the most influence determinant on tax administration efficiency?

1.4 Research Objectives

The objective of this study is to examine the factors influencing tax administration efficiency in Yemen. The following are established as sub-objectives to achieve this objective:

- 1- To examine the relationship between autonomy, accountability, transparency and motivation with tax administration efficiency.
- 2- To determine the most influence determinant on tax administration efficiency.

1.5 Scope of Study

This research aims to study the efficiency of tax administration in Yemen and its determinants. However, it is difficult for the researcher to consider the whole country

due to the security challenges in the northern region. Therefore, this study focuses only on the southern region of Yemen, particularly on Hadhramout. Therefore, the Hadhramout Governorate is chosen because Hadhramout is considered as one of the largest commercial areas in Yemen. The study focuses on individual taxpayers, moreover, the study considers only four factors that may influence the tax administration efficiency, these factors comprise of autonomy, accountability, transparency and motivation. In addition, many studies have been conducted in one region (see Mahdi, 2017; Saeed, 2016); or state (see Alabede, 2012) of a country. This study adopts and follows these prior studies.

1.6 Significance of the Study

This study contributes theoretically and practically to the area of tax administration, as well as to the literature as general. Specifically, the significance of this study are as follows:

1.6.1 Theoretical Contribution

Theoretically, goal-setting and governance have been discussed by many researchers (Muaen, 2016; Mba, 2012; Shah, 2006). However, there is a lack of studies that have tested these theories in the Middle East region, with Yemen being among the countries. Hence, this study is likely the first study that investigates the factors of autonomy, accountability, transparency and motivation and their effect on tax administration efficiency in Yemen environment. Therefore, this research adds to the existing literature by using the goal-setting theory and governance theory.

1.6.2 Practical Contribution

This study contributes practically by studying and identifying the factors that determine tax administration efficiency in the Hadhramout Governorate area of Yemen. Therefore, the study's findings would be useful to the Hadhramout Governorate and the Yemen Tax Authority (YTA), in general, in their effort to improve tax administration efficiency and increase revenue generation for the government coffers by reducing tax noncompliance. Furthermore, the study would also be useful to tax practitioners, students, standard-setters and other stakeholders from tax revenue agencies. It would reduce inefficiency by solving the problems of inefficiency. This would lead to increase in tax compliance, revenue generation and above all, tax administration efficiency and effectiveness.

1.7 Definition Key Terms

There are some important key terms are used in this study can defined as follow:

Presidential Decree (PD): is the rule of law usually issued by the Head of State, in accordance with certain procedures. They have the power of law. The particular term used for this concept may vary from country to country.

General Sales Tax is a tax imposed at one rate with respect to the retail sale of a broad range of classes of items

Hadhramout Governorate: It is a state located in the east of Yemen and occupies 36% of the area of Yemen. Hadhramout consists of 30 districts and its capital is the city of Mukalla. The area of Hadhramout is about 190,000 km.

Khat: is a species of plant dating back to the Horn of Africa and the Arabian Peninsula. Khat contains alkaline cathinone, an amphetamine-like stimulant, which causes excitement, loss of appetite and orgasm.

Fils: is the smallest unit in the Yemeni currency, 100 fills equal to one Yemeni' riyals

1.8 Organization of the Thesis

The organization of this study is based on chapters. Chapter One is introduction which begins with background of the study, problem statement, research questions, research objectives, scope of the study, significance of the study, definition key terms and organization of the thesis. Chapter Two is focused on literature review which is reviewed on overview of the Yemeni tax system and tax administration efficiency, followed with related variables for this study. In addition, the chapter discusses the underpinning theories of the study, and concludes with a chapter, summary. Chapter Three is on research methodology. The chapter begins with an introduction, followed by research framework, hypothesis development, operational definition, research design, collection procedures, population of the study, sample size and sampling techniques. The chapter also discusses questionnaire design, measurement of variables, techniques of data analysis and concludes with chapter summary. This is followed by the Chapter Four which presents the analysis of the data and the results of the study, beginning with the response rate, the profile of the respondents, reliability and factor analysis, descriptive statistics and multiple regression analysis. The chapter also presents hypotheses to test this study. Finally, Chapter Five summarizes the research findings and discusses the theoretical and practical implications of the research results. It also includes study limitations and recommendations for future studies.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter, provides the related literature, on tax administration efficiency. The chapter also provides a brief but precise overview of the tax system in Yemen, defines efficiency and discusses the concept of tax administration efficiency. Also, the chapter discusses the independent variables (autonomy, accountability, transparency and motivation) and dependent variable (tax administration efficiency) of the study by reviewing the related literature on these variables. Moreover, the underpinning theory of the study, which is the goal-setting theory and governance theory, is also discussed and how the theory is related to and supports the study variables. Finally, the chapter concludes with a summary.

2.2 An Overview of the Yemeni Tax System

The Yemeni tax system is characterized by two main tax laws and both laws are administered by the Yemeni Tax Authority (YTA) which is under the Ministry of Finance. If compared to the tax authority of other Middle Eastern countries, Yemen's tax system is considered as complex to understand, less efficient and ineffective (YTA, 2010). This is because the country's tax system is primarily administered by only two main fundamental tax laws, which are: The Income Tax Laws and the General Sales Tax Laws, as amended by Presidential Decree No. 17/2010. The Income Tax Laws No. 31 of 1991 as amended by Presidential Decree No. 17/2010, apply to salaried income, wages, real estate, business and property (YTA, 2010). On the other hand, general sales taxes apply to certain commodities purchased or consumed or and imported or

manufactured, such as cigarettes, petroleum products and Khat, based on a certain percentage (A-Rubaidi, 2012, YTA, 2010).

Al-Rubaidi (2012) and Al-Asaly (2003) stated that the Yemeni government has categorized taxes into direct tax and indirect tax. Direct tax is commonly collected from individual taxpayers for commercial or non-commercial operations and corporate or non-corporate businesses from the income earned. The rate of the taxes differs depending on the type of individual or corporate taxpayer's sources of income. For instance, corporate tax rate is 20%, investment project is 15% and individual rate is a progressive rate which ranges from 10% to 15%. Small firms are also charged based on a progressive rate between 10% to 20% and mobile service providers are charged 50% (YTA, 2010). The indirect taxes are collected in the country in the form of general sales tax (GST). From 2006 to 2016, the standard rate charged was 5%, whereas the averagely charge is 4.7% (YTA, 2010). For example, the tax charged on manufacturers and importers is 35%, service providers as well as consumers of certain commodities, such as Khat is 40%, cigarettes, 35% and petroleum products from 5% to 25% Fils per litre (A-Rubaidi, 2012).

Salaried individual taxpayers must compute and file their taxes to the authorities within a period of 10 days after the month of earning the salary. If an individual is working for a non-resident employer, the employer is responsible for filing and submitting the taxes to the authorities within the specified period. In a situation where the employee is a foreigner, he or she is obliged by law to submit his or her tax returns before leaving the country and must show the tax clearance certificate to the immigration during exit (A-Rubaidi, 2012, YTD, 2010). For the corporate taxpayers, they have 120 days to file taxes starting from the year-end supported by the documents showing the profit or loss

and audited financial report (YTD, 2010). In addition, large corporate taxpayers' tax returns must be certified by a registered chartered accountant.

2.3 Theories Related to Tax Administration Efficiency

Basically, two fundamental theories are used to explain the relationships among the variables of the framework in this study. The essence of using theoretical underpinnings in explaining relationships among the variables is to give a true guide, appropriate logical inference, solid philosophical base and proper understanding of the study and potential contribution the study intends to make to the body of knowledge. The two theories are the goal-setting theory and the governance theory.

2.3.1 Goal-Setting Theory

Locke (1990), started studying the goal-setting theory in, the mid-1960s and continued to research on it for more than 30 years. Locke derived the idea of setting goals from Aristotle's form of ultimate causality. Aristotle speculated that purpose could cause work. Thus, Locke began to research on the objectives which influence human activity.

Locke developed and refined his theory of goal-setting in the 1960s, and published his first paper on, "The Theory of Motivation " in 1968. In addition, Locke and Latham (1990), goal-setting theory states that many conditions are particularly important for achieving a successful goal. These objectives include accepting and adhering to goals, the characteristics of goals, the difficulty of objectives and the reactions (O'Neil & Drillings, 1994). Latham (1990), studied the effects of goal-setting in the workplace. The results support Locke's findings that there is an inextricable link between goal-setting and workplace performance. In 1990, Locke and Latham published their core work, Theory of Setting Goals and Performing Tasks, while identifying five other

characteristics of goal-setting success (clarity, challenge, commitment, feedback and complexity of tasks).

The motivation concept as a variable is employed in the model to examine its significance in relation to administrative efficiency of tax administration in Yemen. For instance, the motivational goals put in place to motivate the tax collectors into carrying out their duties diligently with patriotism as well as the taxpayers in complying with the tax payment. Therefore, this study seeks to explain the link between motivation and tax administration efficiency in the framework.

This concept was employed by (DeWalt) et al. (2009), where he found a direct relationship between those who achieved motivation and the set goals to generate supplementary goals or create additional challenging features to the present goals based on feedback. Also, another vital concept that the goal-setting theory lays much emphasis on is autonomy. Autonomy allows the tax administrators to act independently of any external influences that can jeopardize their activities.

The basic assumption is that autonomy leads to a high degree of efficiency. Parker et al. (2009) observed that autonomy in the workplace enhances self-efficacy, which in turn, improves performance towards achieving the set goals of an organization. Based on the above-mentioned assertions, the general vision and structure of the goal-setting theory is to motivate individuals and teams to do more and perform better.

2.3.2 Governance Theory

According to Stoker (2007), the emergence of governance theory from the early 1990s onwards has been one of the core developments in public administration. The governance theory starts by recognizing that public administrations stretch beyond

multiple government institutions to those drawn from the community, voluntary and private sectors. Rakner and Gloppen (2003) looked at governance as the decision-making process and the process through which decisions are implemented. For tax administration to achieve efficiency and effectiveness or to implement the decisions in an appropriate manner, good governance plays a vital role.

The study of Stoker (1998), states that tax administration is considered as a formal government structure by which decisions are arrived at and implemented; therefore, in the absence of good governance mechanisms, tax administration decision-making may lead to corrupt practices. There are eight major characteristics of a good governance: consensus-oriented, participatory, transparency, accountability, equitable and inclusive, responsible, effective and efficient and follow the rule of law (Aguilera & Cuervo-Cazurra, 2004; Stoker, 1998). Good governance is an ideal, which is hard to accomplish in its totality and very few tax administrations in the world have come close to achieving good governance in its totality (Mba, 2012).

The governance theory is the other theory employed by this study. In accordance with the governance theory, accountability and transparency are likely to have greater impact on tax administration efficiency. The more accountable and transparent the tax administration is, the higher the compliance rate by the taxpayers, which will eventually translate into higher tax revenue generation by the tax authorities (Clark, 2011). The main aim of corporate governance is to enhance accountable disclosure and transparency, the monitoring role and performance of the board of directors, ensuring the independence of auditors and guaranteeing the autonomy of non-executive directors (Clark, 2011).

Therefore, the governance theory is a concept that refers to the organization and balance of powers of various actors involved in the organization's activities, most especially accountability and transparency. Having linked the variables in the framework with the theoretical underpinnings, the next section is summary.

2.4 Tax Administration Efficiency

According to Rahman (2009), tax administration efficiency is a primary determinant of effective revenue generation, implementation of tax policy and conducive environment for investment. Earlier, Erard (1994) argued that the main objective of any tax authority is to collect tax revenue for the government according to the established tax laws and enforce government tax policies that can increase tax compliance and restore taxpayers' confidence in the tax system as well as tax administration. This is a good quality of tax administration, include efficient in process and ensure high compliance rate in implementing and administering the tax system and tax policies.

Inefficient tax administration would not provide quality services to the taxpayers and hence, there will be a high cost of running the system and problems for voluntary tax compliance. The OECD (2011) states that efficient tax administration would enhance tax compliance, reduce operational and compliance costs, and above all, increase revenue generation. In addition, they further opined that internal structure and design of tax administration would also determine efficiency of process together with resource allocation, motivation and autonomy of the tax authority. According to Alm and Duncan (2014), efficiency of tax collection and tax administration is high in many OECD countries and low in non-OECD nations because of variations in the tax system and tax policies that are designed to monitor the revenue authorities and increase tax revenue collection.

Several factors have been identified as the causes of tax administration inefficiency in developing countries. Ogbonna (2009) argued that lack of trained officials, lack of autonomy, poor record-keeping, lack of accountability and transparency, corruption and poor service quality are some of the factors that cause tax administration inefficiency in a country's tax system. Normally, tax administrations are faced with different issues related to tax collection due to some predominant characteristics in the economy and taxpayers' attitude toward taxation. Often, the tax administration's incapability results in inefficiency and ineffectiveness.

Gurama and Mansor (2015) stated that any modern and efficient tax administration needs to review its tax policies and tax administration style by incorporating new strategies and efficient tax processes through motivation, accountability and transparency of all of the administrative processes. Joon and Kim (2011) added that the function of the tax administration can be enhanced by establishing effective tax policies, tax laws, autonomous administration, staff and taxpayer's motivation and strong commitment by the government.

A study sponsored by the United Nations (2000) on improving tax administration performance in African Sub-Saharan countries shows that to achieve tax administration efficiency, there is a need to have clear administrative strategies, accountability, transparency in decision-making, motivated tax officials and incentives for taxpayers. In addition, an adequate time framework and competent human resources that can handle the improvement process and deliver positive outcomes, are also vital. This discussion and identification from the UN and other studies highlighted above, clearly show the importance of an efficient tax administration and how efficiency is determined using the same factors.

Baurer (2005) studied tax administration in developing countries and concluded that external oversight and duty segregation, good internal control, strong code of conduct, transparency and accountability, are some of the strong factors that determine efficient tax administration in many emerging economies. In addition, Shagari (2014) argued that autonomy of tax administration, motivation, transparency, trained personnel and ICT are strong determinants of tax administration efficiency. Furthermore, Muaen (2016) added that leadership style, motivation, ICT, autonomy and training are the determinants of tax administration efficiency in Libya. Therefore, strong tax administration is characterized by efficiency of processes and effectiveness of tax administration in coordinating all the resources under its disposal to earn a meaningful and fruitful outcome (Schlotterbeck, 2017).

The State Revenue Service (SRS) also contended that adequate regulatory framework, open and fair communication across all organizational levels, training of personnel and optimal allocation of resources, can enhance tax administration efficiency (Shagari, 2014). Therefore, to attain efficiency, the tax administration must have trained personnel, utilize its resources professionally and follow the tax laws, rules and regulations.

Ogbonna (2009) concluded that lack of tax administration efficiency in Nigeria is due to tax officials' and taxpayers' poor motivation, lack of transparency and accountability, weak fiscal autonomy, complexity of tax laws and other related tax policies. In addition, Olatunji et al. (2009) showed that dishonesty of tax administration staff negatively affects tax administration efficiency. Hassan (2012) added that lack of adequate staff, motivation and incentives and infrastructure can affect the tax administration's efficiency.

In summary, tax administration efficiency is very important in a country for promoting an effective tax system. Any tax administration that is not efficient and fails to determine the factors that limit its efficiency would no longer be effective. If the tax system of a country is not effective, it sends a signal that the government of that country would not have sufficient revenue from its tax collection and hence, tax evasion and tax avoidance would prevail. Therefore, there is a need to have an efficient tax administration that is capable of generating income for the government in an effective manner, where taxpayers would see the benefit of paying taxes for their own social well-being.

2.5 Autonomy and Tax Administration Efficiency

Casasnovas, McDaid and Costa-Font (2009) described organizational autonomy as a method that facilitates policy-making and improving processes to satisfy the need for public services and customers' compliance. Autonomy in an organization is a mechanism that can lead to efficiency in policy-making which would affect the public or customers' behaviour in patronizing the services offered by the organization. Rahman (2009) argued that efficient tax administration autonomy would increase transparency in the tax system and hence facilitate the tax process and reduce administrative costs and compliance bureaucracy. In addition, Crandall (2010) posited that autonomy in tax administration and other governmental agencies responsible for collecting revenue can increase their performance and eliminate the administrative difficulties through improved efficiency and effective service quality delivery.

However, it has also been argued that a autonomous tax administration would enhance efficiency in developing countries. According to Taliercio (2004), a autonomous tax administration would improve the tax authority's efficiency and increase commitment

to generating sufficient revenue for the government in developing countries. In addition, autonomy could serve as a response to weak corporate governance where tax administrators are empowered with enough control over their tax personnel, procurement and budget to appropriately administer the tax organization in an efficient and effective manner (Schlotterbeck, 2017).

Evelyn and Luzira (2004) explained that an organization's administrative autonomy from unprecedented interference would increase efficiency, minimize bureaucracy in executing management decisions and improve service quality and performance effectiveness. For that reason, Manasan (2003) concluded that if the revenue authority successfully sustains autonomy, this would lead to its administrative efficiency and effective revenue generation. These two assertions both stress the importance of organizational autonomy and how autonomy would affect the efficiency and effectiveness of the organization's performance. It is also pointed out that successful autonomy can enhance the tax administration's efficiency and effectiveness (Pantamee & Mansor, 2016).

Therefore, in summary, tax administration autonomy would increase taxpayers' compliance, simplify the tax system process and reduce bottlenecks in the tax administration's operational performance. Onyeukwu (2010) also argued that tax administration autonomy would simplify the tax system, increase efficiency and reduces taxpayers' compliance burden as well as costs. Therefore, autonomy of tax administration would enhance tax administration efficiency and effectiveness. Organizational autonomy would not be efficient without being accountable; therefore, the next section discusses accountability of tax administration as a determinant of tax administration efficiency.

2.6 Accountability and Tax Administration Efficiency

Accountability is a mechanism used both in public and private organizations to establish good governance. According to Shah (2006) and Fjeldstad (2006), accountability is a tool used to signify good governance in the private and public sectors by ensuring that they are accountable to their institutional partners. In other words, accountability by virtue and by practice is an important tool in public and private organizations, by way of establishing efficient and effective governance. But the question of who is accountable and to whom in an organization varies from one to another, depending, on the action taken and decisions made for internal or external administrative improvement (Shah, 2006; Arora, 2016).

According to Toikka (2011), accountability is a dominant factor of tax administration efficiency and effectiveness. He further added that if the tax administration is accountable, any decision taken by the tax officials on taxpayers would take into consideration how this would affect the tax system's efficiency, and in the long run, to what extent taxpayers would be affected. The tax authority, as a government agency, therefore, should be accountable to the government and taxpayers as stakeholders in any decision-making that can exert influence on their efficiency and actions (Pantamee & Mansor, 2016).

It is also said that having the right and appropriate accountability in government agencies, especially in tax collection by the tax authority, would reduce and even eradicate the issues and constraints of inefficiency and ineffectiveness of performance (Crandall, 2010). Mikesell (2003) argued that if tax administration is accountable, indeed, this would increase the taxpayers' certainty and compliance attitude and at the same time, it would enhance tax administration efficiency and effectiveness. This is

because any action or services offered by tax administration can be easily traced back by the tax administrators and reward and penalty can be identified for whoever deserves it (Schlotterbeck, 2017; Mba, 2012).

In summary, accountability is one of the main tools for good governance. Good governance can improve organizational performance, efficiency and effective achievement of its goals and objectives. Therefore, tax administration efficiency and effectiveness can be determined through its accountability in any action and hence, how it can be held accountable for its actions as an agent of government that handles the government's source of income. In addition, an accountable tax administration can add value to the tax system, increase taxpayers' compliance and boost government income to carry out its activities. Accountability in an organization goes hand-in-hand with transparency; therefore, the next variable of this study is transparency.

2.7 Transparency and Tax Administration Efficiency

Therkildsen (2004) described transparency as establishing and following organization rules and regulations to achieve stated objectives. Prasopoulou (2011) stated that transparency is taking actions and making decisions freely, giving room for accessibility to information to anyone that is involved in the decision-making or action in an organization. In tax administration, it is therefore expected that any action or decision-making that has to do with the tax stakeholders should be made openly and freely by all so that everyone understands. It has also been argued that transparency of tax administration would increase performance efficiency and reduce the issues of bottlenecks in decision-making and tax officials' performance toward achieving tax administration objectives (Gurama & Mansor, 2015).

According to Schlotterbeck (2017), lack of transparency in tax administration would lead to poor performance and weak relationship between the tax stakeholders. Hence, taxpayers would be discouraged. He further stated that transparent tax administration would increase performance efficiency, enhance data integrity and facilitate strong relationship between the tax system and tax stakeholders. In addition, transparency in tax administration can ease the review of tax policies by considering the tax stakeholders and how any new policy or an existing one is affecting their role besides identifying areas that need to be improved. Therefore, tax administration needs to be transparent for efficient and effective implementation of tax policies and maintaining good governance characteristics (Arora, 2016; Mba, 2012).

Mikesell (2003) posited that transparency in tax administration would increase taxpayers' compliance, ease the government's process to review tax rate periodically and also improve tax administration performance efficiency. In addition, Rahman (2009) argued that transparency in tax administration is a key for determining the tax administration's efficiency, thus improving its effectiveness. Transparency also serves as a catalyst for minimizing chances of tax administrators' corruption and facilitating performance efficiency (Pantamee & Mansor, 2016).

Lack of transparency in tax administration would lead to poor implementation of tax policies and other misappropriations in the tax system. Alouis and Gideon (2013) contended that if the tax administration lacks transparency in its functions, this would create problems in implementing tax policies, weaken revenue generation, increase corruption and shrink performance efficiency. They argued that transparency in the tax administration would promote performance efficiency and hence improve administrative effectiveness. In addition, Mba (2012) and Crandall (2010) said that

transparent tax administration will be efficient, and this would increase the taxpayers and tax officials' mutual understanding and increase tax compliance.

2.8 Motivation and Tax Administration Efficiency

According to Antonioni (1999), the amount of effort people are willing to put in their work depending on the degree to which they feel their motivational needs will be satisfied. In addition, Robbins and Judge (2008) opined that motivation is a process which accounts for individual intensity, direction or/and persistent effort toward accomplishing organizational goals and objectives. According to Rainey and Steinbauer (1999), efficiency of public sector agencies or institutions can be enhanced by three main inter-related components of mission, public service and intrinsic reward or motivation. This means when public employees perceive their job as important or significant for achieving organizational objectives that can be useful to the general public, then they would try to put more effort to ensure that their job is accomplished and receive some kind of gesture as a motivation and reward for their performance.

An organization's administrative efficiency can be enhanced using different ways to encourage employees, such as motivation, incentives and other rewards. Wright (2004) observed that administrative efficiency in an organization could be improved and measured using the motivation of the employees to hard work and be recognized and promoted. It is also documented that motivated employees may increase process efficiency and effectiveness of the organization (Shagari, 2014). In other words, if the employees are offered some kind of motivation by their employer, this would facilitate their performance and encourage them to work efficiently for achieving the said incentives, gaining recognition by the organization and keeping up its reputation.

Mougbo (2013) studied the effect of employees' motivation on organizational performance in companies using descriptive research design; he found that extrinsic motivation offered to the employees in an organization significantly increases their performance efficiency and productivity. In a similar study, Marsden and Richardson (1992) argued that strong motivation among Inland Revenue staff would increase their performance efficiency and administrative effectiveness by accomplishing goals and objectives. There is no doubt that employees' motivation is related to the organization's administrative efficiency. Furthermore, motivated organization employees are expected to increase the organization's performance and hence facilitate the attainment of the organization's visionary objectives.

In summary, a qualified and motivated workforce is an important tool for improving service delivery and increasing organizational productivity. Organizational success depends on motivated employees and this would determine how administrative and other performance efficiency can be achieved. In addition, beyond any reasonable doubt, motivation is one of the determinant factors of administrative efficiency and the efficiency of the tax administration is not an exception.

2.9 Chapter Summary

In this chapter, the Yemeni tax system is discussed in a brief but precise manner. The chapter further discusses the concept of tax administration efficiency which is the present study's dependent variable. In addition, the chapter describes the independent variables of the study and their relationship to tax administration. The variables are autonomy, accountability, transparency and motivation. Finally, the chapter discusses the underpinning theories of study and how the theories are related to the study variables.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the methodology and procedures to collect the data and data collection instrument. The chapter also explains the research framework, hypothesis development, operational definition, research design and data collection procedures. In addition, the chapter provides the population of the study, sample size, sampling technique, measurement for variables and techniques of data analysis. Finally, the chapter concludes with a summary.

3.2 Research Framework

Normally, research framework is built based on theory to provide a guide for testing a study hypothesis. Hair, Money, Samuel and Page (2007) stated that research framework could be described as a diagram that shows the connection between variables that are built on theory logically and visually shows how the formulated hypotheses would be tested. This study examines the determinant factors of tax administration efficiency in Yemen using autonomy, accountability, transparency and motivation as independent variables, whereas tax administration efficiency is the dependent variable.

Therefore, the research framework of this study is developed based on the goal-setting and governance theories as an underpinning theory to provide justification for the goals of the study. The study examines the relationship between the independent and dependent variables to test how far the independent variables determine the effect of the dependent variable and their workability in Yemen. The research framework is as illustrated in Figure 3.1 below:

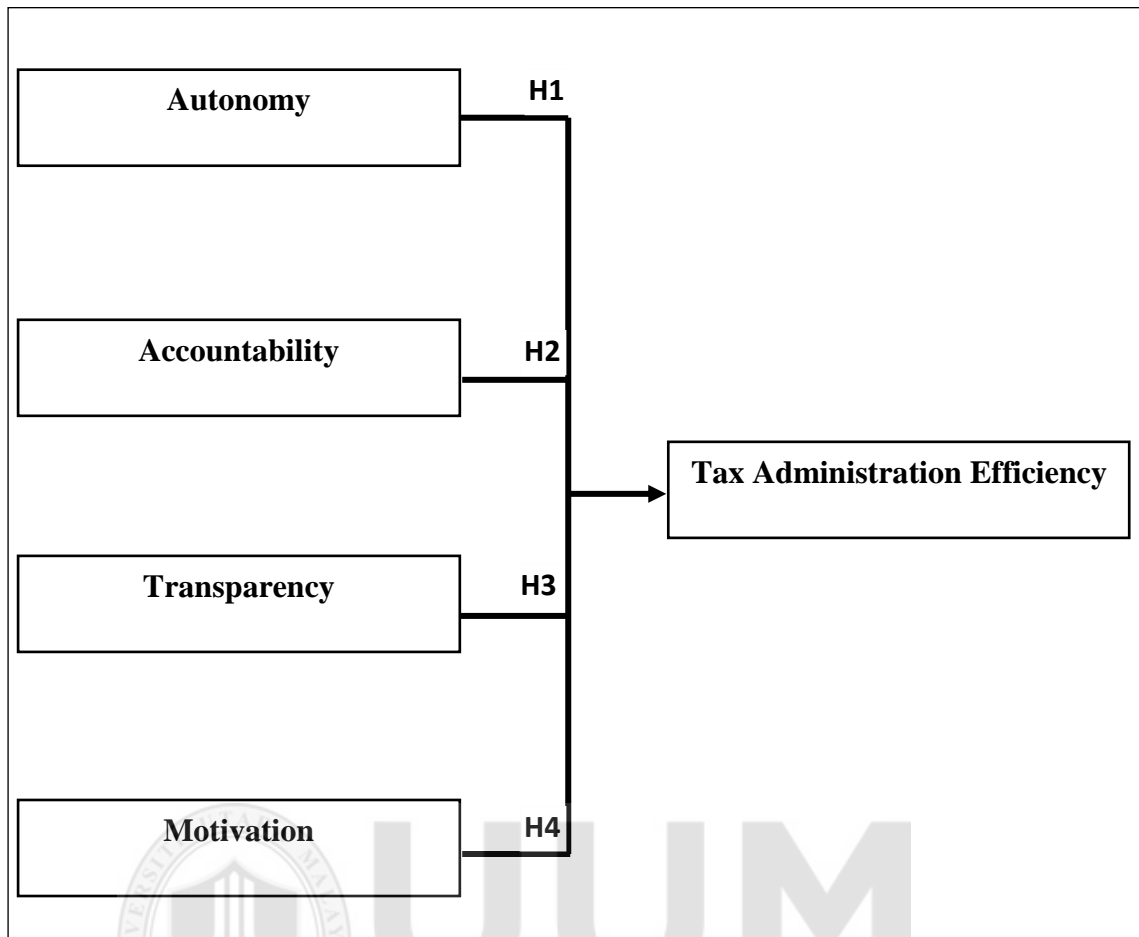


Figure 3.1
Research Framework

3.3 Hypothesis Development

In this section, hypotheses are developed to describe the relationship between the dependent variable (tax administration efficiency) and independent variables (autonomy, accountability, transparency and motivation).

3.3.1 Autonomy and Tax Administration Efficiency

Autonomy and organizational efficiency have been studied by different researchers to know the extent to which autonomy affects organizational efficiency. Goerdel and Pitts (2006) studied the relationship between autonomy and organizational performance in public management and their study shows that autonomy has a positive relationship with managers' performance. They argued that when managers perceive if they

encounter policy change motivated by political influence, then organizational performance would suffer the most. They suggested that to enhance performance efficiency, the organization must be autonomous and free from politically motivated interference.

Demuzere, Verhoest and Bouckaert (2008) examined the degree to which managerial autonomy affects the use of management techniques. The findings of their study show that an autonomous organization easily disseminates information and there are no conflicts of interest within the organization. In addition, Gammelgaard et al. (2012) investigated the factors that can improve organizational performance and concluded that organizational autonomy is one of the key facilitators of administration in inter-organizational relationship. They further showed that autonomy would eventually influence organizational administration efficiency and effectiveness.

According to Cekmecelio and Gunse (2004), autonomy has a positive relationship with administrative efficiency and creativity. Evelyn and Luzira (2004) added that administrative autonomy would reduce organizational bureaucracy, increase quality of service and above all, improve management performance efficiency. In addition, London (2013) examined the effect of autonomy in a district administration and the result shows that there is a significant relationship between autonomy and administrative efficiency.

In tax administration, Manasan (2003) argued that successful revenue authorities are those that have high degree of autonomy that would enhance their administrative efficiency. Taliercio (2004) observed that if a revenue authority is autonomous, this would improve the tax administration's efficiency and productivity, i.e., the autonomy of the tax administration is a mechanism or tool for enhancing the tax authority's

efficiency and effectiveness. Furthermore, Shagari (2014) in his study on determinants of tax administration efficiency, disclosed that autonomy has a significant relationship with tax administration, i.e., when tax administration is autonomous, to some extent, this would increase its efficiency and hence improve effectiveness towards achieving goals and objectives. Therefore, this study develops the following hypothesis:

H1: There is a significant relationship between autonomy and tax administration efficiency.

3.3.2 Accountability and Tax Administration Efficiency

Crandall's (2010) study shows that agencies for revenue collection for the government would perform better if they are accountable for their actions. If administration is not accountable, then they would lose credibility of performance efficiency and effectiveness. Therefore, accountability is positively related to organizational performance efficiency and effectiveness (Pantamee & Mansor, 2016).

In a different study, Mba (2012), while studying accountability and transparency of tax administration in the United Kingdom (UK), showed that accountability of tax administration would enhance the administration's efficiency and effectiveness. He added that if the tax administration is accountable for all of its tax processes and transactions, this would increase their efficiency, facilitate more tax compliance and add value to the tax system. In addition, Mikesell (2003) contended that accountable tax administration would increase tax compliance and remove tax system bottlenecks, hence increasing efficiency. This assertion shows that accountability is correlated with tax administration efficiency toward achieving goals and objectives.

Shah (2006) studied accountability of tax administration performance efficiency and the result shows that there is a positive relationship between tax administration performance efficiency and accountability. The more the tax administration is accountable, the more the performance efficiency that would be achieved. Toikka (2011) observed that accountability would enhance tax administration efficiency and increase trust of taxpayers in the tax system by boosting their tax morale. According to Schlotterbeck (2017), tax administration would be more efficient and effective if the administration is accountable for its actions and committed to ethical standards, rules and regulations under the system. Therefore, from the above discussion, accountability of tax administration would improve performance efficiency, and both are positively correlated. In addition, Ochuodho (2015) argued there is a significant association between accountability to stakeholders and efficiency-and-effectiveness. Therefore, this study develops the following hypothesis:

H2: There is a significant relationship between accountability and tax administration efficiency.

3.3.3 Transparency and Tax Administration Efficiency

According to Crandall (2010), transparency in an organization's administration has strong influence on administrative efficiency. He further added that if tax administration is accountable, the level of its efficiency would positively improve and staff would become conscious of their duties and offer better services. In a related study, Alouis and Gideon (2013) investigated the system and challenges of revenue generation in Zimbabwe tax administration. Their result shows that transparency in tax collection and administration process has a significant relationship with tax administration efficiency. They further argued that transparency is one of the determinants of an

efficient and effective tax administration with the potential of collecting and administering tax revenues.

Mba (2012) studied tax administration transparency in the UK and the result shows that a transparent tax administration is more efficient and effective in collecting tax income for the government. He added that to achieve efficient and productive tax administration, transparency in process, ethical conduct and decision-making should be maintained, hence increasing taxpayers' compliance. Mikesell (2003) argued that transparency in tax administration would increase taxpayers' compliance, ease administrative processes and management efficiency. It is further argued that efficiency of tax administration depends on transparency of the tax authorities in dealing with all tax stakeholders within and outside the tax administration.

Rahman (2009) claimed that transparency is positively correlated with tax administration efficiency. He argued that because of accountability, opportunities of the tax administrators to practice corruption are significantly reduced and the number of ethical practices increased. In addition, every staff member of the tax administration would behave according to the rules and regulations to avoid punishment and maintain his or her integrity and reputation. Therefore, this study develops the following hypothesis:

H3: There is a significant relationship between transparency and tax administration efficiency.

3.3.4 Motivation and Tax Administration Efficiency

Croxton and Moniz (2009) studied employees' motivation in public-sector organizations. The findings show that intrinsic rewards positively influence public sector employees.

Similarly, Afful-Broni (2012) analysed the association between job performance and motivation using descriptive survey design with a sample of 200 University employees. The result shows that lack of staff motivation and poor salary package negatively affect their morale and on-the-job performance. In other words, their job performance is significantly related to motivation and good monthly salary.

Manzoor (2012) investigated the connection between organizational effectiveness and employees' motivation. The findings show that motivated employees always work to achieve the organization's objectives, growth and prosperity, whereas unmotivated employees see no reason for accomplishing goals and objectives efficiently. In a similar study, Solomon et al. (2012) examined the impact of motivation and organizational performance in Nigeria. The result of the study shows that adequately motivated employees would perform more efficiently and productively. They further added that motivation is related to employees' efficiency and organizational performance.

On the other hand, Dobre (2013) studied the motivational determinants that influence employees towards increasing performance in an organization. The determinants studied include employees' recognition and empowerment in relation to their performance and achieving organizational objectives. The result shows that employees' recognition and empowerment on-the-job not only enhance their performance efficiency, growth and innovation, but also improve their motivational level and

organizational efficiency. Based on this literature, motivation is said to be one of the determinants of administrative efficiency. Onjoro, Arogo, & Embeywa, (2015) found that there is a significant relationship between motivational factors and performance. The issue of employee motivation and quality assurance has become a matter of importance, provided to workers, motivated and efficient and effective.

In tax administration, Marsden and Richardson (1992) examined the effect of motivation on Inland Revenue staff performance. The findings of the study show that motivation increases staff and administrative efficiency and effectiveness. Similarly, Muaen (2016) examined the factors of tax administration efficiency in Libya and his findings show that there is a positive and significant relationship between motivation and tax administration efficiency, i.e., tax administration efficiency is positively influenced by staff motivation. Anderson (2009) found that public service motivation is not a major determinant of organizational efficiency. Shagari (2014) studied determinants of tax administration efficiency and found that motivation has insignificant relationship with tax administration efficiency. Moreover, motivated tax staff are more efficient on-the-job, and this would enhance the tax administration efficiency in totality. In addition, Therefore, this study develops the following hypothesis:

H4: There is a significant relationship between motivation and tax administration efficiency.

3.4 Research Design

The objective of this study is to examine the determinants that influence tax administration efficiency in Yemen. To achieve this objective, the study adopted a

survey method for data collection. According to Jain and Srivastava (2013), survey is a way to achieve self-reporting facts about the ideas, behaviour, opinions and assertions characteristic of a particular population. For that reason, the present study is a quantitative research approach in which a cross-sectional process was used to collect data only at one point in time. In addition, the instrument used to collect the data is a questionnaire. Questionnaire is defined as a set of important constructs used to collect data in an efficient way from the primary sources of the data (Sekaran & Bougie, 2013). Moreover, questionnaire was used to collect the information from the respondents on the factors that influence tax administration efficiency. In this study, the data collected was analysed using Statistical Package for Social Sciences (SPSS) version 24.

3.5 Operational Definition

The framework of this study consists of five variables derived from different literatures. The operational definition for each variable to suit the current study is discussed as follows:

3.5.1 Tax Administration Efficiency

Tax administration consists of all strategies and principles adopted by Governments for tax planning, imposition, collection and calculation, as well as for the coordination and monitoring of tax officials. Thus, the efficiency of tax administration reduces costs while providing better services to citizens and businesses.

3.5.2 Autonomy

Autonomy refers to the extent to which government departments or agencies can operate independently in terms of law, status, human resources, administrative practices, and budget budgeting.

3.5.3 Accountability

Accountability is the dominant factor in the efficiency and effectiveness of tax administration and responsible tax administration. Any tax administration decision on taxpayers takes into account due its impact on the efficiency of the tax system and, in the long term, the extent to which taxpayers are affected.

3.5.4 Transparency

Transparency as establishing and following organization rules and regulations to achieve stated objectives. transparency is taking actions and making decisions freely, giving room for accessibility to information to anyone that is involved in the decision-making or action in an organization. Therefore, expected that any action or decision-making that has to do with the tax stakeholders should be made openly and freely by all so that everyone understands

3.5.5 Motivation

Motivation is the amount of effort made in the workplace by employees who depend on the levels that feel their motivational needs by the employer. Motivation refers to the process that represents the intensity of the individual and the constant orientation and effort toward organizational goals.

3.6 Measurement of Variables

This study aims to identify the factors determining tax administration efficiency in Yemen. The measurements used for the variables were adapted from past studies and amended to suit the present study. These measurements are explained below.

3.6.1 Tax Administration Efficiency

The measurement of tax administration efficiency is adapted from the study of Shagari (2014) and Muaen (2016). The measurement highlights the perception of individual taxpayers towards tax administration efficiency of Hadhramout Tax Authority. Five statements were provided to measure the dependent variable, using a five-point Likert-Scale (1= strongly disagree, 2= disagree, 3= somehow agree, 4= agree, 5= strongly agree) to show the score of each statement. The statements are illustrated below:

Table 3.1

Tax Administration Efficiency

No.	Items
1	Tax system and tax administration in Yemen are efficient
2	Tax administration in Hadhramout is efficient
3	Income tax collection is efficiently administered
4	Overall, Yemen tax system and administration are efficient and progressive
5	Tax administration in Yemen is positively efficient, simple and effective

Source: Adapted from Shagari (2014) and Muaen (2016)

3.6.2 Autonomy

The measurement of this variable in relation to tax administration efficiency is adapted from the study of Shagari (2014) and Muaen (2016). The measurement highlights the perception of individual taxpayers towards autonomy of Hadhramout Tax Authority. Five statements were provided to measure the variable (autonomy) using a five-point Likert-Scale (1= strongly disagree, 2= disagree, 3= somehow agree, 4= agree, 5= strongly agree) to show the score of each statement. The statements are illustrated below:

Table 3.2
Measurement for Autonomy

No	Items
1	In my opinion, autonomy of tax administration increases administration efficiency
2	Tax administration in Hadhramout is autonomous in decision-making
3	Autonomy of tax administration encourages my tax compliance and hence effectiveness
4	Autonomy of tax administration would discourage tax evasion and hence increase efficiency
5	Tax administration efficiency is significantly related to autonomy

Sources: Adapted from Shagari (2014) and Muaen (2016)

3.6.3 Accountability

The measurement of accountability in relation to tax administration efficiency is adapted from the study of Shah (2006) and Mba (2012). The measurement highlights the perception of individual taxpayers towards accountability of Hadhramout Tax Authority. Five statements were offered to measure this variable using a five-point Likert-Scale (1= strongly disagree, 2= disagree, 3= somehow agree, 4= agree, 5= strongly agree) to show the respondents' agreement to each statement. The statements are illustrated below:

Table 3.3
Measurement for Accountability

No.	Items
1	Accountability of tax officials enhances tax administration efficiency
2	Tax administration in Hadhramout is accountable and efficient
3	Accountability of actions in tax administration increases administrative efficiency, transparency and effectiveness
4	Accountable tax administration encourages tax system efficiency and tax compliance
5	Tax administration performance efficiency is more effective with accountable administration

Source: Adapted from Shah (2006) and Mba (2012)

3.6.4 Transparency

The measurement of this factor in relation to tax administration efficiency is adapted from the study of Shah (2006) and Mba (2012). The measurement highlights the perception of individual taxpayers towards transparency of Hadhramout Tax Authority.

Five statements were provided about transparency to measure the variable using a five-point Likert-Scale (1= strongly disagree, 2= disagree, 3= somehow agree, 4= agree, 5= strongly agree) to express respondents' opinion about each statement. The statements are illustrated below:

Table 3.4
Measurement for Transparency

No.	Items
1	In my own view, transparent tax administration is efficient in actions
2	Transparency reduces bottlenecks and misappropriation in tax administration by enhancing efficiency
3	Transparency in tax administration encourages my tax compliance
4	Transparent tax administration performs efficiently and effectively
5	Transparency is significantly related to tax administration efficiency

Source: Adapted from Shah (2006) and Mba (2012)

3.6.5 Motivation

The measurement of motivation factor in relation to tax administration efficiency is adapted from the study of Shagari (2014) and Muaen (2016). The measurement highlights the perception of individual taxpayers towards motivation of Hadhramout Tax Authority. Five statements were provided to measure motivation using a five-point Likert-Scale (1= strongly disagree, 2= disagree, 3= somehow agree, 4= agree, 5= strongly agree) to show the perception of respondents on each statement. The statements are illustrated below:

Table 3.5
Measurement for Motivation

No.	Items
1	In my opinion, motivating tax officials increase tax administration efficiency
2	Staff motivation increases best efforts on the job of tax administration and efficiency
3	Ethical standards and efficiency on-the-job will be encouraged by staff motivation in tax administration
4	Motivating tax officials will prevent them from corrupt practices in the tax administration and hence increase efficiency
5	Motivation enhances accountability, transparency and efficiency of tax administration

Source: Adapted from Shagari (2014) and Muaen (2016)

3.7 Data Collection Procedures

As described in section 3.4 above, the method of data collection for this study is through self-reporting questionnaire administered by drop-off and pick-up method. Survey method of data collection using questionnaire is viewed as the most truthful and open method of collecting information from a large group of respondents at one point in time (Sekaran & Bougie, 2013). Therefore, in this study, the questionnaire was distributed to individual taxpayers in Hadhramout Governorate. The data was collected from the public, private and self-employed registered taxpayers in the governorate. The names and addresses of the taxpayers were obtained from the Hadhramout Tax Authority. As described in section 3.4 above, the method of data collection for this study is through self-reporting questionnaire administered by drop-off and pick-up method. Survey method of data collection using questionnaire is viewed as the most truthful and open method of collecting information from a large group of respondents at one point in time (Sekaran & Bougie, 2013). Therefore, in this study, the questionnaire was distributed to individual taxpayers in Hadhramout Governorate. The data was collected from the public, private and self-employed registered taxpayers in the governorate. The data was collected through questionnaire which were distributed to the respondents with the help of two research assistance that worked in the same area with the respondents, the time spent for collection data was 45 days. The names and addresses of the taxpayers were obtained from the Hadhramout Tax Authority.

3.8 Population of the Study, Sample Size and Sampling Technique

The population of this study is Hadhramout Governorate individual taxpayers - the selection of taxpayers as respondents of this study besides being employees, was to have trustable and unbiased data, whereby each taxpayer may have a different

expectation of the efficiency of a tax authority. According to the Hadhramout Tax Authority (2016), the total number of registered taxpayers in the Governorate is 20,470 individual public, private and self-employed taxpayers. Based on this population and going by Sekaran and Bougie's (2013) sample size table, the sample size of the given population is 379. In addition, sampling is a process of selecting an adequate number of elements from the population to represent the entire population to ease generalization of the characteristics of the population based on simple random sampling (Sekaran & Bougie, 2013). Therefore, 379 taxpayers were randomly selected and served with the questionnaire to represent the rest of the population. Furthermore, the questionnaire was administered to the individual taxpayers at their various places of employment and business premises according to the addresses provided by the Hadhramout Tax Authority.

3.9 Questionnaire Design

The nature and design of the questionnaire used in this study is close-ended questions. The items or statements used in the questionnaire were adapted from the previous studies of Muaen (2016); Shageri (2014); Mba (2012); and Shah (2006), to suit the objectives (of this study). The questionnaire is divided into three sections - A, B and C. Section 'A' contains demographic information of the respondents; section 'B' contains statements about the independent variables; whereas section 'C' questions are on the dependent variable see Appendix A for English version of the study questionnaire.

The questionnaire is based on a five-point Likert scale, ranging from Strongly Disagree (SD), Disagree (D), Somehow Agree (SHA), Agree (A) and Strongly Agree (SA). The questionnaire was verified by both an expert in English and Arabic language to convey the intended message of the study to the respondents. However, the administered

questionnaire was in the Arabic language due to the fact that Yemen is an Arabic speaking country and the respondents are more familiar and understand Arabic language better than any other language, like English. This would ease the responses and capturing the message across the respondents. Appendix B provides the Arabic version of the questionnaire.

3.10 Technique of Data Analysis

In this study, the data collected was analysed using SPSS as stated in section 3.4 in order to measure the impact of independent variables (autonomy, accountability, transparency and motivation) on the dependent variable (tax administration efficiency) in Yemen Hadhramout Governorate area. The analysis of the data consisted of reliability test, factor analysis, regression analysis descriptive analysis.

3.11 Chapter Summary

Overall, the chapter covers the study methodology in a step-by-step process. It starts with the introduction, followed by research framework, hypotheses development, operational definition, research design and data collection procedures, by discussing them clearly. The chapter also explains the population of the study, sample size, sampling techniques and questionnaire design. In addition, measurement for variables and techniques of data analysis are also covered and extensively discussed. Finally, the chapter concludes with this summary

CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

4.1 Introduction

This chapter presents the results of the current study, which include response rate, profile of respondents and examination of data and results using, reliability test followed by factor analysis and descriptive statistics. Lastly, the results of multiple regression analyses are provided. SPSS (version 24) was used to conduct the above analysis using the data collected from the questionnaires.

4.2 Response Rate

As described in Chapter three, the current study's data were collected from individual taxpayers registered with the Hadhramout Tax Authority in the Hadhramout Governorate by using the questionnaire instrument. A total of 379 questionnaires were distributed to individual taxpayers. The number of questionnaires returned was 223, equal to a response rate of 58.8%. Table 4.1 shows the details and frequency of the response rate.

Table 4.1
Questionnaire Response Rate

Items	Frequency	Percentage of the response
No. of distributed questionnaires	379	-
Returned questionnaires	223	58.8%.
Unusable returned questionnaires	0	-
Usable returned questionnaires	223	58.8%.

Based on the rating of the response rate in literature indicating that the response rate of 70% is very good and the 60% response rate is considered good and the response rate with at least 50% is sufficient for analysis and reporting (Babbie, 2007; Grove, 2006).

Hence, it can be concluded that a response rate of 58.8% (n=223) for this study is good for the analysis and reporting.

4.3 Respondents' Profile

This section consists of demographic and related information about respondents, i.e., age, gender, marital status, educational background, the source of income and years of experience in paying tax to the government for all respondents. The descriptive analysis was run through the analyses-descriptive-frequency procedure as explained by Pallant (2013). The descriptive analysis of the demographic profile of the respondents is shown in Table 4.2.

Table 4.2
Respondents' Profile (n= 223)

Category	Frequency	Percentage (%)
Age:		
20 – 30	13	5.8
31 – 40	131	58.7
41– 50	68	30.5
51 – 60	11	4.9
Above 60	0	0
Gender:		
Male	205	91.9
Female	18	8.1
Marital Status		
Married	200	89.7
Single	17	7.6
Divorced	6	2.7
Educational Background		
Before Secondary School Certificate	14	6.3
Secondary School Certificate	38	17
Diploma	17	7.6
Bachelor's Degree	129	57.8
Postgraduate Degree	25	11.2

Table 4.2 (Continued)
Respondents' Profile (n= 223)

Category	Frequency	Percentage (%)
Type of employment		
Public Sector Employee	116	52
Private Sector Employee	37	16.6
Business/Self-employed	70	31.4
Years of Experience in Paying Tax		
Less than 1 year	52	23.3
2 years to 5 years	140	62.8
6 years to 10 years	28	12.6
More than 10 years	3	1.3

According to Table 4.2, most respondents are aged between 31 to 40 years (58.7%) and 41 to 50 years (30.5%), while 5.8% and 4.9% for the group of respondents of the age between 20 to 30 years and 51 to 60 years, respectively. No respondent is aged above 60 years. Most of the respondents are male (91.9%) and the rest are female (8.1%). For marital status, 89.7% of the respondents are married, followed by single status of respondents at 7.6% and the remaining 2.7% are divorced.

As for education background, it is found that more than half of the respondents have a bachelor's degree representing 57.8% of the respondents. This is followed by 17% having secondary school certificate, while postgraduate degree is 11.2% of respondents. Respondents who hold before secondary school certificate is 6.3% and 7.6% are diploma holders. In terms of type of employment, this study finds that the highest percentage who answered the questionnaire are employees of the public sector (52%), followed by business – self-employed with 31.4% of the respondents and of private sector with 16.6%.

In terms of the period of becoming a taxpayer, the result highlights that 140, which is exactly 62.8%, have between 2 to 5 years' experience in paying tax; while about 23.3%

or 52 respondents have less than one year of becoming taxpayers; and 28 (12.6%) and three (1.3%) have between 6 to 10 and above than 10 years, respectively.

4.4 Reliability Test

A reliability analysis was performed to find the internal consistency of the items. Cronbach's Alpha is most commonly used for testing reliability level. According to Milliron and Jackson (1986), the reliability analysis result will be accepted provided the Cronbach's Alpha coefficient range is between 0.6 and 1.0. Therefore, according to Table 4.3, the results show that Cronbach's Alpha values for tax administration efficiency, autonomy, accountability, transparency and motivation are 0.795, 0.636, 0.783, 0.757 and 0.643, respectively. Overall, the results show that the elements used in this study to measure the variables can be considered as good and acceptable.

Table 4.3
Reliability Analysis of Variables (n= 223)

Variable	No. of items	Cronbach's Alpha
Tax administration efficiency	5	0.795
Autonomy	5	0.636
Accountability	5	0.783
Transparency	5	0.757
Motivation	5	0.643

4.5 Factor analysis

Factor analysis is one of the statistical methods used to determine the variance between certain factors, and also to reduce a large number of factors to a manageable number (Pallant, 2007). The main axis factor with varimax rotation analysis was performed to extract all four constructs. The metadata matrix was implemented to verify the correlation data used in this study using Kaiser-Meyer-Olkin (KMO) index and the Bartlett's Test of Sphericity (BTOS).

As shown in Table 4.4, the examination of the data matrix indicates that the application of factor analysis on the four variables is appropriate because the value of the variables' direction of tax administration efficiency is 0.701; autonomy is 0.631; accountability is 0.737; transparency is 0.708; and motivation is 0.583 with variance explained ranging between 55% and 74%. According to Hair, Black, Babin, Anderson and Tatham (2006), the value of KMO index above 0.50 is acceptable. Therefore, KMO measures show the adequacy of samples are acceptable for this study because they are greater than 0.50.

Table 4.4
Factor Analysis (n= 223)

Variable	No. of Items	No of Factors	KMO	Variance Explained (%)
Tax administration efficiency	5	1	0.701	55.5
Autonomy	5	1	0.631	63.7
Accountability	5	1	0.737	74.2
Transparency	5	1	0.708	72.5
Motivation	5	1	0.583	72.0

4.6 Descriptive Statistics

The use of descriptive statistics includes central and frequency measures, such as mean, median, range, variance and standard deviation (Vogt, 2007). Furthermore, Vogt (2007) stated that descriptive statistics help summarize large data with one number, as well as explain the characteristics of the relationship with a table and graphical approach. In order to study the relationship between each variable (independent and dependent), descriptive statistics, such as mean and standard deviation, are used as a means of clarification. The average value of the variables is obtained by means of measures on a five-point Likert scale. The greater the number of the said five-point Likert scale, the greater the goodness of each variable.

The values closer to five are favourable values, while values near zero are considered unfavourable. A score equal to or greater than four degrees shows a large agreement with a given standard, a score of less than or equal to two is considered low and an average of three degrees is a moderate one. Table 4.5 illustrates descriptive statistical analysis of the data in this study.

Table 4.5
Descriptive Statistics (n=223)

Descriptive Statistics (n=225)

	Variable	Mean	Std. Dev.	Min	Max.
Autonomy					
1.	In my opinion, autonomy of tax administration increases administration efficiency	3.29	1.234	1	5
2.	Tax administration in Hadhramout is autonomous in decision-making	3.51	1.177	1	5
3.	Autonomy of tax administration encourages my tax compliance and hence effectiveness	3.61	1.195	1	5
4.	Autonomy of tax administration would discourage tax evasion and hence increase efficiency	3.75	1.000	1	5
5.	Tax administration efficiency is significantly related to autonomy	3.74	1.157	1	5
Overall		3.5776	.73769		
Accountability					
1.	Accountability of tax officials enhances tax administration efficiency	3.33	1.173	1	5
2.	Tax administration in Hadhramout is accountable and efficient	3.58	1.205	1	5
3.	Accountability of actions in tax administration increases administrative efficiency, transparency and effectiveness	3.64	1.162	1	5
4.	Accountable tax administration encourages system efficiency and tax compliance	3.59	1.197	1	5
5.	Tax administration performance efficiency is more effective with accountable administration	3.78	1.111	1	5
Overall		3.5839	.85599		

Table 4.5 (Continued)
Descriptive Statistics (n=223)

	Variable	Mean	Std. Dev.	Min	Max.
	Transparency				
1.	In my own view, transparent tax administration is efficient in actions	3.61	1.149	1	5
2.	Transparency reduces bottlenecks and misappropriation in tax administration by enhancing efficiency	3.40	1.181	1	5
3.	Transparency in tax administration encourages my tax compliance	3.66	1.163	1	5
4.	Transparent tax administration performs efficiently and effectively	3.67	1.134	1	5
5.	Transparency is significantly related to tax administration efficiency	3.81	1.066	1	5
	Overall	3.6296	.81097		
	Motivation				
1.	In my opinion motivating tax officials increase tax administration efficiency	3.38	1.140	1	5
2.	Staff motivation increases best effort on-the-job of tax administration and efficiency	3.66	1.119	1	5
3.	Ethical standards and efficiency on-the-job will be encouraged by staff motivation in tax administration	3.75	1.048	1	5
4.	Motivating tax officials will prevent them from corrupt practices in the tax administration and hence increase efficiency	3.91	.932	1	5
5.	Motivation enhances accountability, transparency and efficiency of tax administration	3.93	.935	1	5
	Overall	3.7256	.66632		
	Tax administration efficiency				
1.	Tax system and tax administration in Yemen are efficient	3.75	1.027	1	5
2.	Tax administration in Hadhramout is efficient	3.79	1.042	1	5
3.	Income tax collection is efficiently administered	3.89	.973	1	5
4.	Overall, Yemen tax system and administration are efficient and progressive	3.80	.980	1	5
5.	Tax administration in Yemen is significantly efficient, simple and effective	3.75	1.004	1	5
	Overall	3.7955	.74627		

As shown in Table 4.3, the mean values for autonomy, accountability, transparency, motivation and tax administration efficiency are 3.5 and above. In terms of autonomy, the highest mean score is 3.75, and respondents believe autonomy of tax administration can discourage tax evasion, and hence, increase efficiency. The lowest mean score is 3.29, whereby autonomy of tax administration increases tax administration efficiency. The overall mean score of 3.58 indicates that the respondents view the importance of autonomy as a tool to improve the efficiency of tax administration.

For accountability, the mean score is as shown in Table 4.3; the highest mean value is 3.78 which represent respondents who believe that administration performance efficiency is more effective with accountable administration. Conversely, the lowest mean score of accountability variable is 3.33, whereby respondents, to some extent, believe that accountability of tax officials enhances tax administration efficiency. On the whole, the overall mean for accountability is 3.58.

In terms of transparency, the highest mean score is 3.81, respondents perceive that a transparent of tax administration is efficient in actions. The lowest mean value is 3.40, whereby respondents, to some extent, believe that transparency would reduce bottlenecks and misappropriation in tax administration by enhancing efficiency. The overall mean score of 3.63 revealed that the respondents generally perceive that transparency has an impact on tax administration efficiency.

In addition, for motivation mean score, the highest mean value is 3.93. This value is the highest mean value in this study, which represents respondents who believe that motivation enhances accountability, transparency and efficiency of tax administration. Conversely, the lowest mean score of accountability variable is 3.38, meaning that respondents, to some extent, believe that motivating tax officials increase tax

administration efficiency. On the whole, the overall mean value of motivation is 3.73. Moreover, the mean values for autonomy, accountability, transparency and motivation are 3.57, 3.58, 3.62, 3.72 respectively. So, the mean value for motivation is the highest mean value in this study. On the other hand, the lowest mean value was for autonomy variable.

4.7 Multiple regressions

Multiple regressions are defined as a procedure that involves a single variable with two or more independent variables. In other words, the test is used to evaluate the synchronous effect of many independent variables on a dependent variable. This procedure also helps researchers to understand how much variation in the dependent variable is explained by a set of independent variables (Cavana, Delahaye & Sekaran, 2001).

In this section, through the diffusion of multiple regressions technologies, the analysis is more focused on the relationship between the dependent variable, i.e. the efficiency of tax administration and independent variables, which are autonomy, accountability, transparency and motivation. Multiple regression analysis is the most commonly used method in a situation where the aim of the research is to predict the effect of continuous independent variables on a single continuous variable (Genser, Strina, Teles, Prado, & Barreto, 2007).

Table 4.6
Summary of the Regression Model (n= 223)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.650 ^a	.423	.412	.57214

a. Predictors: (Constant), autonomy, accountability, transparency, motivation.

The regression results are as presented in Table 4.6 which shows that adjusted $R^2 = 0.412$, which indicates that the predictor variables, i.e., autonomy, accountability, transparency and motivation successfully explained the variance in tax administration efficiency around 41.2%.

The result of ANOVA analysis in Table 4.7, shows that F value of 39.922 is significant at the 0.000 level of significance. Therefore, it can be inferred that the model in this study is appropriate and fit. Moreover, the general regression model with four variables (autonomy, accountability, transparency and motivation) has run well in defining tax administration efficiency.

Table 4.7
ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	52.273	4	13.068	39.922	.000 ^b
Residual	71.362	218	.327		
Total	123.636	222			

a. Dependent variable: Tax administration efficiency

b. Predictors: (Constant), autonomy, accountability, transparency, motivation.

According to Lind, Marchal and Wathen (2013) and Kumar, Talib and Ramayah (2013), the t-value > 1.9645 shows that the relationships between the independent and dependent variables are significant, and thus the hypotheses are accepted.

According to Table 4.8, the t-values of four independent variables, i.e., autonomy, accountability, transparency and motivation, are more than 1.9645; therefore, these variables have a significant relationship with the dependent variable, i.e., tax administration efficiency.

Table 4.8
Multiple Regressions Analysis

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	.927	.249		3.722	.000***
Autonomy	.201	.056	.198	3.607	.000***
Accountability	-.212	.069	-.243	-3.061	.002**
Transparency	.274	.077	.297	3.564	.000***
Motivation	.515	.112	.460	4.595	.000***

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

4.8 Hypothesis Testing

To achieve the objectives of this study, four hypotheses were developed to examine the relationship between the independent variables autonomy, accountability, transparency and motivation and the dependent variable tax administration efficiency. Consequently, the hypotheses of this study were tested as follows:

Hypothesis 1: There is a significant relationship between autonomy and tax administration efficiency.

As illustrated in Table 4.8, the t-value of 3.607 for autonomy ($p = 0.000$) shows that autonomy has a significant influence on tax administration efficiency. Therefore, this result supports and accepts the prediction of hypothesis H1, that there is a significant relationship between autonomy and tax administration efficiency.

Hypothesis 2: There is a significant relationship between accountability and tax administration efficiency.

In addition, the relationship between accountability and tax administration efficiency is significant, as reported in Table 4.8 ($B = -3.061$, $p = 0.002$). Thus, the regressions results show that H2 is supported.

Hypothesis 3: There is a significant relationship between transparency and tax administration efficiency.

Table 4.8 shows that transparency ($Beta = .297$, $t \text{ value} = 3.564$, $p = .000$) is significant at .000. In addition, transparency has a significant value of .000, which is less than .05, which confirms that there is a significant relationship between transparency and tax administration efficiency. Thus, the regressions result shows that H3 is supported.

Hypothesis 4: There is a significant relationship between motivation and tax administration efficiency.

As shown in Table 4.8, there is a significant relationship between motivation and tax administration efficiency. The analysis shows a significant relationship between motivation and tax administration efficiency ($Beta = .460$, $t \text{ value} = 4.595$, $p = .000$). The regressions result shows that H4 is supported.

4.9 Summary of Findings

The results of the hypotheses testing in Section 4.8 indicate that the regressions results documented in Table 4.8 support four hypotheses (H1, H2, H3, & H4). Consequently, the summary of the hypotheses findings is presented in Table 4.9.

Table 4.9
Summary of findings

Hypothesis	Statement	Findings
H1	There is a significant relationship between autonomy and tax administration efficiency.	Supported
H2	There is a significant relationship between accountability and tax administration efficiency	Supported
H3	There is a significant relationship between transparency and tax administration efficiency	Supported
H4	There is a significant relationship between motivation and tax administration efficiency.	Supported

4.10 Summary of the Chapter

In this chapter, the results of the study are analysed and presented using statistical tools to reach the results. The chapter begins by reporting the response rate, profile of respondents, descriptive analysis including frequencies, methods and standard deviation of all demographic and background variables. Reliability was also tested in this chapter to ensure the reliability of data for each construct. Likewise, factor analysis was used to test the association of the data used in the study using the Kaiser-Meyer-Olken (KMO) test and Bartlett's test of Sphericity. Finally, regression analysis results were used to test the acceptability of hypotheses, and a summary of findings is provided.

CHAPTER FIVE

DISCUSSION AND CONCLUSION

5.1 Introduction

Generally, this chapter summarizes and discusses the results of the study based on research questions and objectives. This chapter begins with a summary of the study, which discusses the results of this research. In addition, this chapter presents the importance of the results in terms of the theoretical and practical implications for policymakers and other stakeholders. Finally, the limitations and recommendations as well as the conclusion of the study are provided.

5.2 Recapitulation of the Study

The current study attempts to examine the relationship between autonomy, accountability, transparency and motivation and tax administration efficiency of individual taxpayers in Yemen. In chapter four, data analysis and results were presented. Of the 379 questionnaires distributed to individual taxpayers in Hadhramout Governorate, only 223 questionnaires (58.8%) were returned, all of which were complete and could be used for data analysis. The respondents in this study are current taxpayers in Yemen.

5.2.1 The Relationship between Autonomy, Accountability, Transparency, Motivation and Tax Administration Efficiency

Specifically, the results of this study show that four factors have a significant impact on the efficiency of tax administration and all four factors supported this study. The discussion of the hypotheses developed in this study is presented as follows:

As mentioned in chapter four, the findings presented in Table 4.8 indicate that there is a significant relationship between autonomy and tax administration efficiency in Yemen. This supports the first hypothesis which states that there is a significant relationship between autonomy and the efficiency of tax administration. This shows that the granting of autonomy leads to effective administrative processes. This means that the autonomy of the tax administration increases the efficiency of the administration too. It concludes that the tax administration in Hadhramout is independent in the decision-making process. In addition, the autonomy of the tax administration encourages tax compliance, and thus its effectiveness, which also discourages tax evasion, thus increasing efficiency. Moreover, the efficiency of tax administration is significantly correlated with autonomy. This result is consistent with previous findings, such as Shagari (2014); London (2013); Gammelgaard et al. (2012); Demuzere, Verhoest, and Bouckaert (2008); Goerdel and Pitts (2006); Cekmecelio and Gunse (2004); Evelyn and Luzira (2004); and Taliercio (2004); Manasan (2003).

The second hypothesis proposed that there is a significant relationship between accountability and tax administration efficiency. The findings presented in Table 4.8 show that there is a significant relationship between accountability and tax administration efficiency. Therefore, Hypothesis 2 is supported. This means that, the accountability of tax officials has a significant impact on the efficiency of tax administration and the tax administration in Hadhramout is accountable and efficient. In addition, accountability of actions in tax administration increase administrative efficiency, transparency and effectiveness and the administration of tax subject to accountability promote the efficiency of the tax system and tax compliance, Moreover, the efficiency of tax administration performance is more effective with accountable

management. This result is consistent with previous findings, such as. Crandall's (2010); Ochuodho (2015).

The third hypothesis proposed that significant relationship between transparency and tax administration efficiency. The results in Table 4.8 show that there is a significant relationship between transparency and tax administration efficiency. Thus, the third hypothesis is supported. This means that transparent tax administration is efficient in procedures and transparency reduces bottlenecks and misappropriation in tax administration by enhancing efficiency and encouraging tax compliance. Transparent tax administration also performs efficiently and effectively. Moreover, transparency is significantly linked to the efficiency of tax administration. The result of this study is in line with previous studies that have found a significant relationship between transparency and tax administration efficiency, such as Alouis and Gideon (2013); Mba (2012); Crandall (2010); Rahman (2009); and Mikesell (2003).

The fourth hypothesis proposed that there is a significant relationship between motivation and tax administration efficiency. The relationship between motivation and tax administration efficiency shows a significant relationship as presented in Table 4.8. This shows the perception of individual taxpayers of the level of motivation in tax administration. If the level of motivation is high, then the level of tax administration efficiency will also be high. This means that stimulating tax officials increases the efficiency of tax administration and leads to increased efforts in the field of tax administration and efficiency. In addition, ethical standards and efficiency will be encouraged at work by motivating staff in tax administration, this prevents them from corrupt practices in tax administration and thus increases efficiency. Moreover, motivation enhances accountability, transparency and efficiency of tax administration.

This result is consistent with previous findings, such as Muaen (2016); Dobre (2013); Manzoor (2012); Solomon et al. (2012); Croxton and Moniz (2009); Marsden and Richardson (1992).

5.2.2 The Most Influence Determine in Tax Administration Efficiency

The results of this study (Table 4.5) show that motivation has the highest mean value compare with other factors in this study i.e., autonomy, accountability and transparency. Hence, Hadhramout tax administration is high confronted with this determine factor. Therefore, motivation is the most influence factor in determining the efficiency of tax administration in Hadhramout, Yemen.

5.3 Theoretical Implication of the Study

This study, by experimentally studying four literature streams and relationships between autonomy, accountability, transparency and motivation and the efficiency of tax administration, clearly contributes to the body of knowledge. The results show that autonomy, accountability, transparency, and motivation, have significantly relationships with the efficiency of tax administration. Therefore, this study concurs with the current literature available on tax administration in the context of Yemen. The results of this study are very important not only for researchers, but for academicians, students and all relevant stakeholders as well.

For researchers, the results of the study provide evidence from Yemen regarding factors that determine the efficiency of tax administration. For students studying issues in action tax, the study provides further understanding of the variables and their relationship with the efficiency of tax administration. Similarly, this study provides an innovative development with respect to variables that have not been previously

experimentally investigated in Yemen. As a study on the subject, this study provides the basis of understanding for all stakeholders, including researchers, academics and tax officials. Finally, the theories of goal setting and governance are discussed in this study. Therefore, this research adds to the existing literature in the context of the goal-setting and governance theories.

5.4 Practical Implication of the Study

The study effectively contributes to the utilization of all tax stakeholders. While building empirical relationships between selected variables with a very well-established tax structure in Yemen, the current study provides practical implications. It is clear that the practical implementation of the results will greatly benefit the country's tax authority to support government officials and the system of tax collection. While understanding the dynamics that are very influential in the efficiency of tax administration in Yemen, the study provides practical implications for the government to understand the factors that affect the efficiency of tax administration in terms of motivation among employees, transparency of management and autonomy. This study also provides an additional emphasis on exploring the relationships between the efficiency of tax administration and autonomy, accountability, transparency and motivation from the Yemeni perspective. In general, this study will be of great assistance to tax authorities as well as government officials. Tax authorities and government officials can use the results to review and introduce tax laws and policies by taking into account the implications of tax administration efficiency.

5.5 Limitations and Recommendations

This study is the first empirical study on determinants of tax administration efficiency in Hadhramout, Yemen. Further studies are therefore needed to examine the relationship between autonomy, accountability, transparency and motivation, and the efficiency of tax administration in other areas of Yemen, because these factors would have explained the efficiency in about 41.2%. Meaning that, there are other factors would give impact on the efficiency of tax administration in Yemen.

The current study has some limitations that must be considered. First, due to time constraints and resources, this study is limited as it consists only of taxpayers who receive income from work and who are self-employed. Hence, it is suggested that future research and studies covering a broader sample of all types of businesses and institutional entities registered or operating in Yemen, such as large corporations and SMEs, be undertaken for the sole purpose of providing a clearer picture and better understanding of the efficiency of tax administration.

Second, this finding cannot be widely generalized in Yemen, as the scope of the study is limited to the Hadhramout Governorate only. Therefore, it is suggested that future studies be undertaken to expand the sample to cover other governorates in Yemen to see whether there are similarities or differences in results. The researcher also recommends that future researchers examine other possible factors relevant to the study from other regions.

5.6 Conclusion

In conclusion, this study provides empirical evidence on the factors that determine the efficiency of tax administration in Yemen. Search results provide support for four hypotheses. More importantly, this study has achieved the research objectives as mentioned in Chapter One, despite some limitations.

This study examines the determinants of the efficiency of tax administration in Yemen. The results show that four factors, namely autonomy, accountability, transparency and motivation, have a significant impact on the efficiency of tax administration. Therefore, the Yemeni government and the tax authority should take note of the factors that affect the efficiency of tax administration, which could be useful for reducing problems.

Although this study has successfully tested research hypotheses and made valuable theoretical and practical contributions to knowledge, there are many limitations that pave the way for future studies to investigate this phenomenon further.

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APPENDICES

APPENDIX A: QUESTIONNAIRE (ENGLISH)



**Universiti Utara Malaysia
College of Business**

QUESTIONNAIRE

FACTORS DETERMINING TAX ADMINISTRATION EFFICIENCY IN YEMEN

Dear respondent

This is a research about tax administration efficiency determinant factors in Yemen. The objective of the study is to identify the factors influencing tax administration efficiency as perceived by Yemenis taxpayers. This survey is required for a partial fulfilment of my master in International Accounting (M.Sc. International Accounting) in Universiti Utara Malaysia. Please be assured that, all the information gathered will be treated with the strict confidentiality. Please be feeling free to answer the question honestly. I would like to appreciate your effort, time and cooperation to complete this questionnaire.

Thank you.

Yours sincerely

Researcher/Student

Abobakr Ramadhan Salem Al_Harethi (817748)

Master of Science (International Accounting)

College of Business

Universiti Utara Malaysia

SECTION A: DEMOGRAPHIC INFORMATION

Instruction: Please tick (✓) in to an appropriate group that fits your characteristics.

1. **Age group**
 - ☐ 20 – 30
 - ☐ 31 – 40
 - ☐ 41 – 50
 - ☐ 51 – 60
 - ☐ Above 60 years
2. **Gender group:**
 - ☐ Male
 - ☐ Female
3. **Marital Status**
 - ☐ Married
 - ☐ Single
 - ☐ Divorce
4. **Educational background**
 - ☐ Before Secondary School Certificate
 - ☐ Secondary School Certificate
 - ☐ Diploma certificate
 - ☐ Bachelor Degree
 - ☐ Postgraduate Degree
5. **Type of employment**
 - ☐ Public sector employee
 - ☐ Private sector employee
 - ☐ Business/ Self-employed
6. **Years of experience in paying tax to the government**
 - ☐ Less than 1 year
 - ☐ 2 years to 5 years
 - ☐ 6 years to 10 years
 - ☐ 11 years to 15 years
 - ☐ 16 years to 20 years
 - ☐ More than 20 years

SECTION B

1. Instruction: The statements or items listed below, in your own view, how do you perceive **autonomy** in relation to tax administration efficiency. Please respond to the statements using the 5 Likert-scale below. **1= strongly disagree, 2= disagree, 3= somehow agree, 4= agree, 5=strongly agree**

No	Statements/ Items	1	2	3	4	5
1	In my opinion, autonomy of tax administration increase administration efficiency					
2	Tax administration in Hadhramout is autonomous in decision taking					
3	Autonomy of tax administration encourage my tax compliance and hence effectiveness					
4	Autonomy of tax administration would discourage tax evasion and hence increase efficiency					
5	Tax administration efficiency is significantly related with autonomy					

2. Instruction: The statements or items listed here, in your opinion, to what extent **accountability** influences tax administration efficiency. Please respond to the statements using the 5 Likert-scale below. **1= strongly disagree, 2= disagree, 3= somehow agree, 4= agree, 5=strongly agree**

No	Statements/ Items	1	2	3	4	5
1	Accountability of tax official enhances tax administration efficiency					
2	Tax administration in Hadhramout is accountable and efficient					
3	Accountability of actions in tax administration increases administrative efficiency, transparency and effectiveness					
4	Accountable tax administration encourages system efficiency and tax compliance					
5	Tax administration performance efficiency is more effective with accountable administration					

3. Instruction: The statements or items listed below are related to **transparency** of tax administration efficiency. Please respond to the statements using the 5 Likert-scale below. **1= strongly disagree, 2= disagree, 3= somehow agree, 4= agree, 5=strongly agree**

No	Statements/ Items	1	2	3	4	5
1	In my own view, transparent tax administration is efficient in actions					
2	Transparency reduces bottleneck and misappropriation in tax administration by enhancing efficiency					
3	Transparency in tax administration encourage my tax compliance					
4	Transparent tax administration performs efficiently and effectively					
5	Transparency is significantly related to tax administration efficiency					

4. Instruction: The statements or items listed here, in your opinion, to what extent **motivation** influences tax administration efficiency. Please respond to the statements using the 5 Likert-scale below. **1= strongly disagree, 2= disagree, 3= somehow agree, 4= agree, 5=strongly agree.**

No	Statements/ Items	1	2	3	4	5
1	In my opinion motivating tax officials increase tax administration efficiency					
2	Staff motivation increase best effort on the job of tax administration and efficiency					
3	Ethical standard and efficiency on the job will be encourage by staff motivation in tax administration					
4	Motivating tax officials will prevent them from corrupt practice in the tax administration and hence increase efficiency					
5	Motivation enhance accountability, transparency and efficiency of tax administration					

SECTION C

Instruction: The statements or items here are to what extent you agree about them in view of **tax administration efficiency**. Please respond to the statement using the 5 Likert-scale below. **1= strongly disagree, 2= disagree, 3= somehow agree, 4= agree, 5=strongly agree.**

No	Statements/ Items	1	2	3	4	5
1	Tax system and tax administration in Yemen is efficient					
2	Tax administration in Hadhramout is efficient					
3	Income tax collection is efficiently administered					
4	Overall, Yemen tax system and administration are efficient and progressive					
5	Tax administration in Yemen is significantly efficient, simple and effective					

-END OF QUESTIONNAIRE-
THANK YOU FOR YOUR COOPERATION

APPENDIX B: QUESTIONNAIRE (ARABIC)



جامعة الشمال (اوتارا) الماليزية

كلية الاعمال

استبيان

العوامل المحددة لكفاءة إدارة الضرائب في اليمن

عزيزي المستجيب

تم تصميم هذا الاستبيان لدراسة عوامل تحديد كفاءة الإدارة الضريبية في اليمن. الهدف من الدراسة هو تحديد العوامل المؤثرة على كفاءة الإدارة الضريبية كما يرى دافعو الضرائب اليمنيين. هذا المسح مطلوب للوفاء الجزئي سيدتي في المحاسبة الدولية (ماجستير في المحاسبة الدولية) في جامعة أوتارا الماليزية. ثقتي تماما من أن جميع المعلومات التي تم جمعها سيتم التعامل معها بسرية تامة. يرجى أن يتم الاجابة على السؤال بصراحة.

وأود أن أقدر جهودكم وتعاونكم لاستكمال هذا الاستبيان.

تفضلوا بقبول فائق الاحترام

الباحث:

ابو بكر رمضان سالم الحارثي (817748)

ماجستير في (المحاسبة الدولية)

كلية الأعمال

جامعة أوتارا الماليزية

القسم الأول

معلومات عامة:

يرجى وضع علامة (√) في المربع أو ملئ الفراغ بالإجابة المناسبة:

- 1 - العمر: [] 20 — 30
[] 31 — 40
[] 41 — 50
[] 51 — 60
[] ما فوق 60
- 2- الجنس: [] ذكر
[] انثى
- 3- الحالة الاجتماعية: [] أعزب
[] متزوج
[] غير ذلك، يرجى تحديد ذلك
- 4- مستوى التعليم : [] ثانوية عامة او اقل
[] دبلوم
[] بكالوريوس
[] دراسات عليا (ماجستير - دكتوراه)
- 5- مصدر الدخل [] موظف في القطاع العام (حكومي)
[] موظف في القطاع الخاص
[] عمل خاص
[] غير ذلك، يرجى تحديد ذلك
- 6- سنوات الخبرة في دفع الضرائب للحكومة
[] اقل من سنة
[] 1 — 5 سنوات
[] 6 — 10 سنوات
[] 11 — 15 سنة
[] 16 — 20 سنة
[] اكثر من 20 سنة



UUM
Universiti Utara Malaysia

القسم الثاني

1- الاستقلالية:

البيانات أو البنود المدرجة أدناه، من وجهة نظركم، كيف تنظرون إلى الاستقلالية فيما يتعلق بكفاءة الإدارة الضريبية. يرجى الرد على البيانات من خلال وضع علامة (√) في المربع وفقاً للآتي:

1 = لا أوافق بشدة، 2 = لا أوافق، 3 = أوافق بطريقة أو بأخرى، 4 = أوافق، 5 = أوافق بشدة

الرقم	الأسئلة	1	2	3	4	5
1	في رأيي أن استقلالية الإدارة الضريبية تزيد من كفاءة الإدارة					
2	الإدارة الضريبية في حضرموت مستقلة في اتخاذ القرار					
3	إن استقلالية الإدارة الضريبية تشجع على الامتثال الضريبي ومن ثم الفعالية					
4	الاستقلال الذاتي للإدارة الضريبية يثبط التهرب الضريبي ومن ثم يزيد من الكفاءة					
5	ترتبط كفاءة الإدارة الضريبية بشكل إيجابي مع الحكم الذاتي					

2- المساءلة

البيانات أو البنود المدرجة هنا، من وجهة نظركم، إلى أي مدى تؤثر المساءلة على كفاءة إدارة الضرائب. يرجى الرد على البيانات من خلال وضع علامة (√) في المربع وفقاً للآتي:

1 = لا أوافق بشدة، 2 = لا أوافق، 3 = أوافق بطريقة أو بأخرى، 4 = أوافق، 5 = أوافق بشدة

الرقم	الأسئلة	1	2	3	4	5
1	مساءلة المسؤول الضريبي تعزز كفاءة الإدارة الضريبية					
2	الإدارة الضريبية في حضرموت تتميز بالمساءلة والفعالية					
3	تؤدي المساءلة في الإجراءات في مجال الإدارة الضريبية إلى زيادة الكفاءة الإدارية والشفافية والفعالية					
4	الإدارة الضريبية الخاضعة للمساءلة تشجع على كفاءة النظام والامتثال الضريبي					
5	كفاءة أداء الإدارة الضريبية تكون أكثر فعالية مع الإدارة الخاضعة للمساءلة					

3- الشفافية

البيانات أو البنود المدرجة هنا، من وجهة نظركم، إلى أي مدى تؤثر الشفافية على كفاءة إدارة الضرائب. يرجى الرد على البيانات من خلال وضع علامة (√) في المربع وفقاً للآتي:

1 = لا أوافق بشدة، 2 = لا أوافق، 3 = أوافق بطريقة أو بأخرى، 4 = أوافق، 5 = أوافق بشدة

الرقم	الأسئلة	1	2	3	4	5
1	أرى أن الإدارة الضريبية ذات الشفافية تتسم بالكفاءة في الإجراءات					
2	تقلل الشفافية من الاختناق والاختلاس في الإدارة الضريبية وتعزز الكفاءة					
3	تشجع الشفافية في إدارة الضرائب على الامتثال الضريبي					
4	تعمل الإدارة الضريبية ذات الشفافية بكفاءة وفعالية					
5	ترتبط الشفافية ارتباطاً إيجابياً بكفاءة الإدارة الضريبية					

4- الحوافز:

البيانات أو البنود المدرجة هنا، في رأيك، إلى أي مدى يؤثر الحافز على كفاءة إدارة الضرائب. يرجى الرد على البيانات من خلال وضع علامة (√) في المربع وفقاً للآتي:
1 = لا أوافق بشدة، 2 = لا أوافق، 3 = أوافق بطريقة أو بأخرى، 4 = أوافق، 5 = أوافق بشدة

الرقم	الأسئلة	1	2	3	4	5
1	اعتقد أن تحفيز مسؤولي الضرائب يزيد من كفاءة الإدارة الضريبية					
2	ويؤدي تحفيز الموظفين إلى زيادة الجهد المبذول في إدارة الضرائب وكفاءتها					
3	يتم تشجيع المعايير الأخلاقية والكفاءة في العمل من خلال تحفيز الموظفين في إدارة الضرائب					
4	تحفيز المسؤولين عن الضرائب يمنحهم من الممارسات الفاسدة في الإدارة الضريبية، وبالتالي زيادة الكفاءة					
5	الحافز يعزز المساءلة والشفافية وكفاءة الإدارة الضريبية					

القسم الثالث

كفاءة الإدارة الضريبية

البيانات أو البنود هنا هي إلى أي مدى كنت توافق عليها في ضوء كفاءة إدارة الضرائب. يرجى الرد على البيانات من خلال وضع علامة (√) في المربع وفقاً للآتي:
1 = لا أوافق بشدة، 2 = لا أوافق، 3 = أوافق بطريقة أو بأخرى، 4 = أوافق، 5 = أوافق بشدة

الرقم	الأسئلة	1	2	3	4	5
1	نظام الضرائب والإدارة الضريبية في اليمن فعال					
2	الإدارة الضريبية في حضرموت فعالة					
3	يتم إدارة تحصيل ضريبة الدخل بكفاءة					
4	عموماً، فإن النظام الضريبي والإدارة في اليمن يتسم بالكفاءة والتقدم					
5	إن الإدارة الضريبية في اليمن تتسم بالكفاءة الإيجابية والبساطة والفعالية					

انتهت الأسئلة

شكراً لكم على تعاونكم

APPENDIX C: SPSS OUTPUT

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Descriptive

Descriptive Statistics						
	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Au1	223	1	5	3.29	1.234	1.523
Au2	223	1	5	3.51	1.177	1.386
Au3	223	1	5	3.61	1.195	1.429
Au4	223	1	5	3.75	1.000	1.000
Au5	223	1	5	3.74	1.157	1.340
Ac1	223	1	5	3.33	1.173	1.376
Ac2	223	1	5	3.58	1.205	1.451
Ac3	223	1	5	3.64	1.162	1.349
Ac4	223	1	5	3.59	1.197	1.433
Ac5	223	1	5	3.78	1.111	1.235
Tr1	223	1	5	3.61	1.149	1.320
Tr2	223	1	5	3.40	1.181	1.394
Tr3	223	1	5	3.66	1.163	1.352
Tr4	223	1	5	3.67	1.134	1.286
Tr5	223	1	5	3.81	1.066	1.136
Mo1	223	1	5	3.38	1.140	1.299
Mo2	223	1	5	3.66	1.119	1.251
Mo3	223	1	5	3.75	1.048	1.099
Mo4	223	1	5	3.91	.932	.869
Mo5	223	1	5	3.93	.935	.874
TA1	223	1	5	3.75	1.027	1.054
TA2	223	1	5	3.79	1.042	1.086
TA3	223	1	5	3.89	.973	.947
TA4	223	1	5	3.80	.980	.961
TA5	223	1	5	3.75	1.004	1.009
Valid N (listwise)	223					

Descriptive Statistics(Overall)

Descriptive Statistics						
	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Au	223	1.00	5.00	3.5776	.73769	.544
Ac	223	1.00	5.00	3.5839	.85599	.733
Tr	223	1.00	5.00	3.6296	.81097	.658
Mo	223	1.60	5.00	3.7256	.66632	.444
TA	223	1.00	5.00	3.7955	.74627	.557
Valid N (listwise)	223					

Reliability autonomy

Case Processing Summary

		N	%
Cases	Valid	223	100.0
	Excluded ^a	0	.0
	Total	223	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.636	.644	5

Item Statistics

	Mean	Std. Deviation	N
Au1	3.29	1.234	223
Au2	3.51	1.177	223
Au3	3.61	1.195	223
Au4	3.75	1.000	223
Au5	3.74	1.157	223

Inter-Item Correlation Matrix

	Au1	Au2	Au3	Au4	Au5
Au1	1.000	.499	.057	.206	.187
Au2	.499	1.000	.172	.315	.300
Au3	.057	.172	1.000	.150	.198
Au4	.206	.315	.150	1.000	.569
Au5	.187	.300	.198	.569	1.000

Hotelling's T-Squared Test

Hotelling's T-Squared	F	df1	df2	Sig
24.238	5.978	4	219	.000

Reliability accountability

Case Processing Summary

	N	%
Cases Valid	223	100.0
Excluded ^a	0	.0
Total	223	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.783	.784	5

Item Statistics

	Mean	Std. Deviation	N
Ac1	3.33	1.173	223
Ac2	3.58	1.205	223
Ac3	3.64	1.162	223
Ac4	3.59	1.197	223
Ac5	3.78	1.111	223

Inter-Item Correlation Matrix

	Ac1	Ac2	Ac3	Ac4	Ac5
Ac1	1.000	.640	.291	.220	.326
Ac2	.640	1.000	.361	.346	.459
Ac3	.291	.361	1.000	.475	.552
Ac4	.220	.346	.475	1.000	.534
Ac5	.326	.459	.552	.534	1.000

Hotelling's T-Squared Test

Hotelling's T-Squared	F	df1	df2	Sig
29.638	7.309	4	219	.000

Reliability (transparency)

Case Processing Summary

		N	%
Cases	Valid	223	100.0
	Excluded ^a	0	.0
	Total	223	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.757	.758	5

Item Statistics

	Mean	Std. Deviation	N
Tr1	3.61	1.149	223
Tr2	3.40	1.181	223
Tr3	3.66	1.163	223
Tr4	3.67	1.134	223
Tr5	3.81	1.066	223

Inter-Item Correlation Matrix

	Tr1	Tr2	Tr3	Tr4	Tr5
Tr1	1.000	.198	.291	.415	.510
Tr2	.198	1.000	.657	.332	.246
Tr3	.291	.657	1.000	.372	.341
Tr4	.415	.332	.372	1.000	.485
Tr5	.510	.246	.341	.485	1.000

Hotelling's T-Squared Test

Hotelling's T-Squared	F	df1	df2	Sig
28.304	6.980	4	219	.000

Reliability motivation

Case Processing Summary

	N	%
Cases Valid	223	100.0
Excluded ^a	0	.0
Total	223	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.643	.653	5

Item Statistics

	Mean	Std. Deviation	N
Mo1	3.38	1.140	223
Mo2	3.66	1.119	223
Mo3	3.75	1.048	223
Mo4	3.91	.932	223
Mo5	3.93	.935	223

Inter-Item Correlation Matrix

	Mo1	Mo2	Mo3	Mo4	Mo5
Mo1	1.000	.573	.132	-.005	.053
Mo2	.573	1.000	.147	.147	.220
Mo3	.132	.147	1.000	.381	.350
Mo4	-.005	.147	.381	1.000	.737
Mo5	.053	.220	.350	.737	1.000

Hotelling's T-Squared Test

Hotelling's T-Squared	F	df1	df2	Sig
35.806	8.831	4	219	.000

Reliability

tax administration efficiency

Case Processing Summary

		N	%
Cases	Valid	223	100.0
	Excluded ^a	0	.0
	Total	223	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.796	.797	5

Item Statistics

	Mean	Std. Deviation	N
TA1	3.75	1.027	223
TA2	3.79	1.042	223
TA3	3.89	.973	223
TA4	3.80	.980	223
TA5	3.75	1.004	223

Inter-Item Correlation Matrix

	TA1	TA2	TA3	TA4	TA5
TA1	1.000	.603	.328	.430	.389
TA2	.603	1.000	.261	.330	.345
TA3	.328	.261	1.000	.652	.400
TA4	.430	.330	.652	1.000	.663
TA5	.389	.345	.400	.663	1.000

Hotelling's T-Squared Test

Hotelling's T-Squared	F	df1	df2	Sig.
4.759	1.174	4	219	.323

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.642
Bartlett's Test of Sphericity	Approx. Chi-Square	4177.116
	df	190
	Sig.	.000

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.650 ^a	.423	.412	.57214	.423	39.922	4	218	.000

a. Predictors: (Constant), Mo, Au, Ac, Tr

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	52.273	4	13.068	39.922	.000 ^b
	Residual	71.362	218	.327		
	Total	123.636	222			

a. Dependent Variable: TA

b. Predictors: (Constant), Mo, Au, Ac, Tr

Factor analysis

Overall

Communalities

	Initial	Extraction
Au1	1.000	.753
Au2	1.000	.673
Au3	1.000	.717
Au4	1.000	.712
Au5	1.000	.722
Ac1	1.000	.823
Ac2	1.000	.901
Ac3	1.000	.911
Ac4	1.000	.878
Ac5	1.000	.831
Tr1	1.000	.857
Tr2	1.000	.900
Tr3	1.000	.735
Tr4	1.000	.900
Tr5	1.000	.884
Mo1	1.000	.877
Mo2	1.000	.825
Mo3	1.000	.936
Mo4	1.000	.853
Mo5	1.000	.806

Extraction Method: Principal Component Analysis.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.927	.249		3.722	.000
	Au	.201	.056	.198	3.607	.000
	Ac	-.212	.069	-.243	-3.061	.002
	Tr	.274	.077	.297	3.564	.000
	Mo	.515	.112	.460	4.595	.000

a. Dependent Variable: TA